

حمل الآن

مجانا وحصريا

المراجعة رقم (1)

الترم الثاني



Q1: CHOOSE THE CORRECT ANSWER

- 1 If $(x - 3)$ is a factor of the expression: $x^2 - 4x + 3$, then the other factor is
 (a) $(x + 1)$ (b) $(x - 1)$ (c) $(x + 3)$ (d) $(x - 3)$
- 2 A fair die is thrown once, then the probability of appearing a even prime number equals
 (a) 0 (b) $\frac{1}{6}$ (c) $\frac{1}{2}$ (d) 1
- 3 If $x^2 - y^2 = 12$, $x + y = 4$, then $x - y =$
 (a) 3 (b) 8 (c) 16 (d) 2
- 4 Three times the square of the number x is
 (a) $(3x)^2$ (b) $x^2 + 3$ (c) $3x^2$ (d) $\frac{x^2}{3}$
- 5 If a regular die is thrown once and observing the number on the upper face, then the probability of getting a number divisible by 4 equals
 (a) $\frac{1}{6}$ (b) $\frac{1}{3}$ (c) $\frac{2}{3}$ (d) 0
- 6 The volume of a cube of side length 4 cm. equals cm^3 .
 (a) 16 (b) 64 (c) 1 (d) 40
- 7 The S.S of the equation: $x = \frac{4}{x}$, in R is
 (a) $\{4\}$ (b) $\{4, -4\}$ (c) $\{2, -2\}$ (d) $\{\frac{1}{4}\}$
- 8 Eighth of $2^{24} =$
 (a) 2^{16} (b) 2^{21} (c) 2^{23} (d) 2^8
- 9 If $(\frac{3}{4})^x = \frac{64}{27}$, then $x =$
 (a) -2 (b) 3 (c) -3 (d) 2
- 10 $Z - Z^- =$
 (a) Z^+ (b) N (c) \emptyset (d) Z



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- 11** If a coin is thrown once, then the probability of appearing a head equals
- (a) 5% (b) 0.5 (c) 0.5% (d) 50
- 12** If $x - y = 5$, $x^2 + xy + y^2 = 7$, then $x^3 - y^3 = \dots\dots\dots$
- (a) 2 (b) 7 (c) 12 (d) 35
- 13** The S.S. of the equation: $x^2 - 3 = 13$ in R is
- (a) $\{4\}$ (b) $\{4, -4\}$ (c) $\{-4\}$ (d) \emptyset
- 14** $(\sqrt{10} + 3)^{13} (\sqrt{10} - 3)^{13} = \dots\dots\dots$
- (a) $\sqrt{10}$ (b) 13 (c) -1 (d) 1
- 15** If third of a number is 6, then this number is
- (a) 2 (b) 9 (c) 12 (d) 18
- 16** If the expression $x^2 + ax + 64$ is a perfect square, then $a = \dots\dots\dots$
- (a) 16 (b) ± 16 (c) 8 (d) ± 8
- 17** The S.S. of the equation: $x^2 - x = 0$ is where $x \in R$
- (a) $\{0\}$ (b) \emptyset (c) $\{0, 1\}$ (d) $\{1\}$
- 18** If $x^2 + 4x + k$ is a perfect square, then $k = \dots\dots\dots$
- (a) 1 (b) 2 (c) 3 (d) 4
- 19** The S.S of the equation: $3x^2 + 15x - 18 = 0$ in R is
- (a) $\{1, -6\}$ (b) $\{-1, 6\}$ (c) $\{3\}$ (d) $\{3, -6, 1\}$
- 20** If the probability that a student will solve a problem is 0.7, then the number of problems he is expected to solve out of 20 problems equals
- (a) 7 (b) 10
(c) 14 (d) 20



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- 21** If the probability that a pupil succeeds is 80 %, then the probability of his failure is
- (a) 0.8 (b) 0.02 (c) 0.2 (d) 0.08
- 22** If $x^2 - a = (x - 5)(x + 5)$, Then $a = \dots\dots\dots$
- (a) 5 (b) -25 (c) 25 (d) 10
- 23** If $3^x = 9$, then $2^x - 1 = \dots\dots\dots$
- (a) 7 (b) 3 (c) 8 (d) 5
- 24** $2^{2024} = 2^{2023} + \dots\dots\dots$
- (a) 2 (b) 2024 (c) 2^{2024} (d) 2^{2023}
- 25** If $x = 2$ is one of the roots of the equation : $x^2 + 3x + k = 0$, then $k = \dots\dots\dots$
- (a) 2 (b) 5 (c) 10 (d) -10
- 26** The probability of the impossible event equals
- (a) 0 (b) 0.5 (c) 1 (d) \emptyset
- 27** If a regular die is tossed once, then the probability of appearing an even number equals
- (a) $\frac{1}{2}$ (b) $\frac{1}{6}$ (c) $\frac{5}{6}$ (d) 0
- 28** $x^{m-1} \times \dots\dots\dots = 1, x \neq 0$
- (a) x^{-m-1} (b) x^{m+1} (c) x^{m-1} (d) x^{-m+1}
- 29** If $x^2 - 2xy + y^2 = 25$, then $X - y = \dots\dots\dots$
- (a) 25 (b) 5 (c) -5 (d) ± 5
- 30** If the age of Farida 7 years ago was X years, then her age now is years.
- (a) $x - 7$ (b) $x + 7$
(c) $7x$ (d) $\frac{x}{7}$



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31) If the age of Murad after 4 years is x , then his age now is years.

- (a) $x - 4$ (b) $x + 4$ (c) $4 - x$ (d) $4x$

32) $(\sqrt{5} - 3)(\sqrt{5} + 3) = \dots\dots\dots$

- (a) 4 (b) 8 (c) -4 (d) -2

33) The probability of the certain event equals

- (a) 0 (b) 0.5 (c) 1 (d) \emptyset

34) The value of $3^{11} + 3^{12} = \dots\dots\dots$

- (a) 4×3^{10} (b) 3×3^{22} (c) 4×3^{20} (d) 4×3^{11}

35) If $(35)^2 - (15)^2 = 50x$, then $x = \dots\dots\dots$

- (a) 10 (b) 20 (c) 30 (d) 40

36) The S.S of the equation: $x^3 - x^2 = 0$ in R is

- (a) $\{0\}$ (b) $\{0, 1\}$ (c) $\{1\}$ (d) \emptyset

37) If $6^x = 3$, then $(216)^x = \dots\dots\dots$

- (a) 9 (b) 1 (c) 27 (d) 36

38) If $a^2 + b^2 = 15$, $2ab = 10$, Then $a + b = \dots\dots\dots$

- (a) 5 (b) -5 (c) 25 (d) ± 5

39) $x - \frac{1}{x} = 5$, then $x^2 + \frac{1}{x^2} = \dots\dots\dots$

- (a) 25 (b) 20 (c) 23 (d) 27

40) The factorization of $x^3 + 2x^2 - 4x - 8$ is

- (a) $(x^2 - 4)(x - 2)$ (b) $(x - 2)(x + 2)^2$
(c) $(x + 2)(x - 2)$ (d) $(x^2 + 4)(x - 2)$



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- 41) If the expression : $x^2 + bx - 10$ can be factorized, then b may be equal to
- (a) 3 (b) 2 (c) 1 (d) -1
- 42) The S.S. of the equation : $(X - 4)^2 = 0$ in R is
- (a) {4} (b) {0, 4} (c) {0, -4} (d) {-4}
- 43) $x(a - b) + y(a - b) + a - b = a - b(\dots\dots\dots)$
- (a) $x - y$ (b) $x + y$ (c) $x + y - 1$ (d) $x + y + 1$
- 44) $(2^{x+3} - 2^{x+1}) \div 2^x = \dots\dots\dots$
- (a) 8 (b) 6 (c) 8 (d) 16
- 45) If the probability that a pupil succeeds is 80 %, then the probability of his failure is
- (a) 0.8 (b) 0.02 (c) 0.2 (d) 0.08
- 46) If $2^{x-2} = 2^{1-2x}$, then $x = \dots\dots\dots$
- (a) 2 (b) $\frac{1}{2}$ (c) 1 (d) zero
- 47) The S.S of the equation: $\frac{4}{x} = \frac{x}{16}$, in R is
- (a) {4, -4} (b) {8} (c) {8, -8} (d) {64}
- 48) If $x + y = 3$, $x^2 - xy + y^2 = 12$, then $x^3 + y^3 = \dots\dots\dots$
- (a) 4 (b) 36 (c) 9 (d) 24
- 49) If $2^x = 3$, then $2^{1-2x} = \dots\dots\dots$
- (a) $\frac{1}{9}$ (b) $\frac{2}{9}$ (c) $\frac{1}{3}$ (d) $\frac{2}{3}$
- 50) If $x^3 + y^3 = 24$, $x + y = 6$, then $x^2 - xy + y^2 = \dots\dots\dots$
- (a) 4 (b) 12
(c) 18 (d) 30



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51 If $11^{x+2} = 1$, then $x = \dots\dots\dots$

- (a) 1 (b) -2 (c) 2 (d) 7

52 If $(2a - 5)(3a - 2) = 6a^2 + k a + 10$, then $k = \dots\dots\dots$

- (a) 15 (b) 19 (c) -19 (d) 4

53 Sixth the number: $2^{12} \times 3^{12}$ is $\dots\dots\dots$

- (a) 6^2 (b) 6^4 (c) 6^{11} (d) 6^{23}

54 The S.S. of the equation: $X^2 + 9 = 0$ in R is $\dots\dots\dots$

- (a) $\{3\}$ (b) $\{3, -3\}$ (c) $\{-3\}$ (d) \emptyset

55 $3^x \times 3^x \times 3^x = \dots\dots\dots$

- (a) 3^{x+3} (b) 9^x (c) 3^{3x} (d) 27^{3x}

56 If $x^3 + 27 = (x + 3)(x^2 + k + 9)$, then $k = \dots\dots\dots$

- (a) $-6x$ (b) $-3x$ (c) $3x$ (d) $6x$

57 If $3^{2+x} = 5^{x+2}$, then $7^{x+2} = \dots\dots\dots$

- (a) 7 (b) -7 (c) -14 (d) 1

58 If $(X + 3)$ is one factor of the expression : $x^2 + x - 6$, then the other factor is $\dots\dots\dots$

- (a) $x + 3$ (b) $x - 4$ (c) $x + 1$ (d) $x - 2$

59 If $6x = 11$, then $6^{x+1} = \dots\dots\dots$

- (a) 12 (b) 22 (c) 66 (d) 72

60 For the expression: $x^2 - 2x - k$ can be factorized, then $k \neq \dots\dots\dots$

- (a) 8 (b) 3
(c) 6 (d) 15



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Q2: COMPLETE THE FOLLOWING

- 1) The expression : $9x^2 + 16$ can be factorized as a perfect square by adding the term and its additive inverse.
- 2) The S.S. of the equation: $3x^2 - x = 0$ in R is
- 3) If the solution set of the inequality $X < k$ in N is $\{0, 1, 2\}$, then $k = \dots\dots\dots$.
- 4) $\sqrt{2} \times (\sqrt{2})^2 \times (\sqrt{2})^3 = \dots\dots\dots$ (in the simplest form)
- 5) The S.S. of : $2X^2 + 18 = 0$ in R is
- 6) $8x^3 - \dots\dots\dots = (\dots\dots\dots - \dots\dots\dots)(\dots\dots\dots + \dots\dots\dots + 9)$
- 7) If a and b are the two square roots of c where $c \neq 0$, then $a \div b = \dots\dots\dots$.
- 8) If the probability that a pupil succeeds is 0.4, then the probability of his failure is %
- 9) $3^2 + 3^2 + 3^2 = \dots\dots\dots$.
- 10) If $2^x = 3$, then $8^{-x} = \dots\dots\dots$
- 11) If $(X - 5)$ is a factor of the expression : $x^2 - 10x + 25$, then the other factor is
- 12) The sum of the two square roots of the number 16 is
- 13) If x , y are two real numbers where $xy = 0$, then $x = \dots\dots\dots$ or $y = \dots\dots\dots$
- 14) A bag has cards numbered from 0 to 10, if a card is drawn randomly, then the probability that the card carries an even prime number is
- 15) If the expression: $x^2 + 4x + a$ is a perfect square, then $a = \dots\dots\dots$
- 16) $a^2 - 6a + \dots\dots\dots$ (Complete to be perfect square)
- 17) $3^x = 7$, then $3^{x+2} = \dots\dots\dots$



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- 18 In the experiment of throwing a fair die and observing the number on the upper face, then the probability of getting a number greater than 4 is
- 19 $2^2 + 2^2 = 2^{\dots}$
- 20 The S.S of: $x(x - 2)(x + 3) = 0$ in R is
- 21 If $2^x = 3$, $2^y = 5$, then $4^{2x+y} = \dots$
- 22 The quotient: $x^3 - 8$ by $x - 2$ is (when $\neq 2$)
- 23 If $x^2 - K = (x - 3)(x + 3)$, Then the value of K =
- 24 If $x - y = 5$, $x^2 + xy + y^2 = 7$, then $3x^3 - 3y^3 = \dots$
- 25 The age of a man now is X years, then his age after 7 years is years.
- 26 If $5a^2 - 5b^2 = 100$, $a - b = 4$, Then $a + b = \dots$
- 27 $x(y - z) + m(y - z) = (y - z) (\dots)$
- 28 The S.S. of the equation: $(X - 3)(X + 1) = 0$ is ($x \in R$)
- 29 If $7^{1-x} = 3^{1-x}$, then $x = \dots$
- 30 $4x^2 + 28x + \dots$ (Complete to be perfect square)
- 31 If $3^{x+2} = 18$, then $(81)^x = \dots$
- 32 If $0 \leq P(A) \leq \dots$ where A is an event.
- 33 If $x^2 + y^2 = 21$, $xy = 3$, then $(x + y)^2 = \dots$
- 34 If $x^2 - 2xy - 3y^2 = 8$, $x + y = 4$, then $x - 3y = \dots$
- 35 The degree of the algebraic term $-5x^3y$ is



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- 36** If the probability that the student is absent in a school is 0.32, and the number of students of this school is 600, then the number of the present students that day is students.
- 37** If $3^{n+1} = 6$, then $3^n = \dots\dots\dots$
- 38** + $a^6 = a^6$, $a \neq 0$
- 39** $x^2 + \dots\dots\dots + 35 = (x + \dots\dots\dots)(\dots\dots\dots + 5)$
- 40** - $18y^2 + 81$ (Complete to be perfect square)
- 41** $x^3 - 8 = (\dots\dots\dots)(x^2 + 2x + \dots\dots\dots)$
- 42** $3^{10} \times 3^{-10} = 9^{\dots\dots\dots}$
- 43** The solution set of the equation: $X^2 + 25 = 0$ in R is
- 44** If $x + y = 5$, then $8x + 8y = \dots\dots\dots$
- 45** If $a^2 - b^2 = a + b$, then $a - b = \dots\dots\dots$
- 46** If $2^{x-5} = (3 - \sqrt{5})(3 + \sqrt{5})$, then $x^2 = \dots\dots\dots$
- 47** If $6^x = 7$, then $6^{x-2} = \dots\dots\dots$
- 48** If $xy + 3x + yz + 3z = 15$, $y + 3 = 5$, then $x + z = \dots\dots\dots$
- 49** Half of $4^{20} = \dots\dots\dots$
- 50** If $4^{x-29} = \frac{1}{16}$, then $\sqrt{x} = \dots\dots\dots$

اللهم اجعل هذا العمل خالصا لوجهك الكريم واكتب له القبول
والنفع يا كريم يا وهَّاب.



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Q3: ANSWER THE FOLLOWING

1 If $(x + 1)$ is a factor of the expression: $5x^2 - 2x - 7$, then find the second factor

.....
.....

2 A positive integer, if we add its square to its triple, the result will be 18
What is this integer ?

.....
.....

3 In the experiment of composing 2-digit different number from the digit
 $\{1, 2, 3, 4\}$. Find the sample space then Find the probability of getting:

- (a) A number its tens is even
(b) A number both units and tens are even.

4 Factorize each of the following completely:

- (a) $xy + 5x + 7y + 35$ (b) $81x^4 + 4y^4$ (c) $ax - 7a + 3x - 21$

.....
.....

5 If $\frac{6^{2n} \times 2^{2n}}{4^{2n} \times 3^{2n+4}} = 9^{-x}$, then find value of x

.....
.....

6 Find the S.S. of the equation in R:

- (a) $x^2 - 8x = -15$ (b) $x^2 + 8x = 9$
(c) $x^2 + 12 = 8x$ (d) $(2x + 1)^2 = (3x - 1)^2$

.....
.....
.....



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7 Find in R the S.S of the following:

a) $x^2 - 8x + 12 = 0$

b) $x^2 - 9x = 36$

c) $12x^2 = 47x - 45$

.....

d) $5x^2 + 12x = 44$

e) $x(x + 2) = 15$

f) $6x^2 - 7x - 3 = 0$

.....

8 Find the positive real number that if its square is added to five times of it, the result equals 36

.....

9 A box contains 7 red balls, 8 green balls and 5 yellow balls. One ball is drawn randomly. Find the probability of getting :

a) A green ball.

b) A ball not yellow.

c) A red ball.

f) A blue ball.

10 Prove that: $\frac{(\sqrt{2})^2 \times 2^{1-x} \times 12^{2x-1}}{8^x \times 9^x} = \frac{1}{3}$, $\frac{(27)^{x-1} \times 8^x}{(2\sqrt{2})^{2x} \times (3\sqrt{3})^{2x}} = \frac{1}{3}$

.....

11 Find the value of n in each of the following:

a) $\frac{2^n \times 9^{n+1}}{(18)^n} = 3^n$

b) $\frac{(12)^{n-1}}{2^{n-1} \times 3^{n-1}} = 1$

.....

12 Divide the number 20 into two numbers whose product is 75

.....



13 Factorize each of the following completely:

a) $x^2 + 13x - 30$

b) $3x^3 - 81$

c) $2x^2 + 7x + 3$

.....

d) $x^4 + 64y^4$

e) $x^3 + 8$

f) $x^2 - 10x - 24$

.....

g) $(78)^2 - (77)^2$

h) $2 - 2(x - 1)^3$

i) $(a + b)^2 - 4$

.....

14 If $8^{4x-1} = 32$, then find the value of x ?

.....

15 A box contains 30 cards numbered from 1 to 30, a card is drawn randomly. Calculate the probability of drawing a card carrying:

a) An odd number.

b) A number divisible by 5

c) A perfect square

16 If $\frac{7^x \times 6^x}{14^2} = 3^{2-m}$, then find the value of $x + m$?

.....

17 If $xy = 8$, find the numerical value of the expression $(x + y)^2 - (x - y)^2$

.....

18 A positive integer, if we add its square to its triple, the result will be 18 What is this integer ?

.....



FOLLOW US

19 Factorize completely each of the following:

a $x^3 - 8$

b $x^2 - 10xy + 25y^2 - 36$

c $3x^2 + 7x + 2$

.....

d $xy - 5y + 6x - 30$

e $x^2 + 6xy + 9y^2 - 49a^2$

f $10x^2 - 7x - 12$

.....

20 A set of cards numbered from 1 to 10, if one card is drawn from them at random, find the probability that the drawn card carries:

a A prime number

b A number greater than 7

21 Simplify: $\frac{3^{2x+1} \times 25^x}{15^{2x}}$

.....

22 If $3^{x+1} = 81$, $4^{x+y} = 1$, then find the value of x and y?

.....

23 Find in the simplest form: $\frac{4^{x+1} \times 9^{2-x}}{6^{2x}}$, then find the value of the result when $x = 1$

.....

24 A positive integer, its square is more than its 3 times by 40, Find the number?

.....

25 A rectangle with a length more than its width by 4 cm.
 If its area is 21 cm^2 , Find its dimensions.

.....



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Q1: CHOOSE THE CORRECT ANSWER

- 1 If $(x - 3)$ is a factor of the expression: $x^2 - 4x + 3$, then the other factor is
☐ a $(x + 1)$ ☒ b $(x - 1)$ ☐ c $(x + 3)$ ☐ d $(x - 3)$
- 2 A fair die is thrown once, then the probability of appearing a even prime number equals
☐ a 0 ☒ b $\frac{1}{6}$ ☐ c $\frac{1}{2}$ ☐ d 1
- 3 If $x^2 - y^2 = 12$, $x + y = 4$, then $X - y =$
☒ a 3 ☐ b 8 ☐ c 16 ☐ d 2
- 4 Three times the square of the number x is
☐ a $(3x)^2$ ☐ b $x^2 + 3$ ☒ c $3x^2$ ☐ d $\frac{x^2}{3}$
- 5 If a regular die is thrown once and observing the number on the upper face, then the probability of getting a number divisible by 4 equals
☒ a $\frac{1}{6}$ ☐ b $\frac{1}{3}$ ☐ c $\frac{2}{3}$ ☐ d 0
- 6 The volume of a cube of side length 4 cm. equals cm^3 .
☐ a 16 ☒ b 64 ☐ c 1 ☐ d 40
- 7 The S.S of the equation: $x = \frac{4}{x}$, in R is
☐ a $\{4\}$ ☐ b $\{4, -4\}$ ☒ c $\{2, -2\}$ ☐ d $\{\frac{1}{4}\}$
- 8 Eighth of $2^{24} =$
☐ a 2^{16} ☒ b 2^{21} ☐ c 2^{23} ☐ d 2^8
- 9 If $(\frac{3}{4})^x = \frac{64}{27}$, then $x =$
☐ a -2 ☐ b 3 ☒ c -3 ☐ d 2
- 10 $Z - Z^- =$
☐ a Z^+ ☒ b N ☐ c \emptyset ☐ d Z



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- 11) If a coin is thrown once, then the probability of appearing a head equals
 (a) 5% (b) 0.5 (c) 0.5% (d) 50
- 12) If $x - y = 5$, $x^2 + xy + y^2 = 7$, then $x^3 - y^3 =$
 (a) 2 (b) 7 (c) 12 (d) 35
- 13) The S.S. of the equation: $x^2 - 3 = 13$ in R is
 (a) $\{4\}$ (b) $\{4, -4\}$ (c) $\{-4\}$ (d) \emptyset
- 14) $(\sqrt{10} + 3)^{13} (\sqrt{10} - 3)^{13} =$
 (a) $\sqrt{10}$ (b) 13 (c) -1 (d) 1
- 15) If third of a number is 6, then this number is
 (a) 2 (b) 9 (c) 12 (d) 18
- 16) If the expression $x^2 + ax + 64$ is a perfect square, then $a =$
 (a) 16 (b) ± 16 (c) 8 (d) ± 8
- 17) The S.S. of the equation: $x^2 - x = 0$ is where $x \in R$
 (a) $\{0\}$ (b) \emptyset (c) $\{0, 1\}$ (d) $\{1\}$
- 18) If $x^2 + 4x + k$ is a perfect square, then $k =$
 (a) 1 (b) 2 (c) 3 (d) 4
- 19) The S.S of the equation: $3x^2 + 15x - 18 = 0$ in R is
 (a) $\{1, -6\}$ (b) $\{-1, 6\}$ (c) $\{3\}$ (d) $\{3, -6, 1\}$
- 20) If the probability that a student will solve a problem is 0.7, then the number of problems he is expected to solve out of 20 problems equals
 (a) 7 (b) 10 (c) 14 (d) 20



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- 21** If the probability that a pupil succeeds is 80 %, then the probability of his failure is
- (a) 0.8 (b) 0.02 (c) 0.2 (d) 0.08
- 22** If $x^2 - a = (x - 5)(x + 5)$, Then $a = \dots\dots\dots$
- (a) 5 (b) -25 (c) 25 (d) 10
- 23** If $3^x = 9$, then $2^x - 1 = \dots\dots\dots$
- (a) 7 (b) 3 (c) 8 (d) 5
- 24** $2^{2024} = 2^{2023} + \dots\dots\dots$
- (a) 2 (b) 2024 (c) 2^{2024} (d) 2^{2023}
- 25** If $x = 2$ is one of the roots of the equation : $x^2 + 3x + k = 0$, then $k = \dots\dots\dots$
- (a) 2 (b) 5 (c) 10 (d) -10
- 26** The probability of the impossible event equals
- (a) 0 (b) 0.5 (c) 1 (d) \emptyset
- 27** If a regular die is tossed once, then the probability of appearing an even number equals
- (a) $\frac{1}{2}$ (b) $\frac{1}{6}$ (c) $\frac{5}{6}$ (d) 0
- 28** $x^{m-1} \times \dots\dots\dots = 1, x \neq 0$
- (a) x^{-m-1} (b) x^{m+1} (c) x^{m-1} (d) x^{-m+1}
- 29** If $x^2 - 2xy + y^2 = 25$, then $X - y = \dots\dots\dots$
- (a) 25 (b) 5 (c) -5 (d) ± 5
- 30** If the age of Farida 7 years ago was X years, then her age now is years.
- (a) $x - 7$ (b) $x + 7$ (c) $7x$ (d) $\frac{x}{7}$



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31) If the age of Murad after 4 years is x , then his age now is years.

☒ a $x - 4$

☐ b $x + 4$

☐ c $4 - x$

☐ d $4x$

32) $(\sqrt{5} - 3)(\sqrt{5} + 3) = \dots\dots\dots$

☐ a 4

☐ b 8

☒ c -4

☐ d -2

33) The probability of the certain event equals

☐ a 0

☐ b 0.5

☒ c 1

☐ d \emptyset

34) The value of $3^{11} + 3^{12} = \dots\dots\dots$

☐ a 4×3^{10}

☐ b 3×3^{22}

☐ c 4×3^{20}

☒ d 4×3^{11}

35) If $(35)^2 - (15)^2 = 50x$, then $x = \dots\dots\dots$

☐ a 10

☒ b 20

☐ c 30

☐ d 40

36) The S.S of the equation: $x^3 - x^2 = 0$ in R is

☐ a $\{0\}$

☒ b $\{0, 1\}$

☐ c $\{1\}$

☐ d \emptyset

37) If $6^x = 3$, then $(216)^x = \dots\dots\dots$

☐ a 9

☐ b 1

☒ c 27

☐ d 36

38) If $a^2 + b^2 = 15$, $2ab = 10$, Then $a + b = \dots\dots\dots$

☐ a 5

☐ b -5

☐ c 25

☒ d ± 5

39) $x - \frac{1}{x} = 5$, then $x^2 + \frac{1}{x^2} = \dots\dots\dots$

☐ a 25

☐ b 20

☐ c 23

☒ d 27

40) The factorization of $x^3 + 2x^2 - 4x - 8$ is

☐ a $(x^2 - 4)(x - 2)$

☒ b $(x - 2)(x + 2)^2$

☐ c $(x + 2)(x - 2)$

☐ d $(x^2 + 4)(x - 2)$



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- 41) If the expression : $x^2 + b x - 10$ can be factorized, then b may be equal to
- ☒ a 3 ☐ b 2 ☐ c 1 ☐ d -1
- 42) The S.S. of the equation : $(X - 4)^2 = 0$ in R is
- ☒ a {4} ☐ b {0, 4} ☐ c {0, -4} ☐ d {-4}
- 43) $x(a - b) + y(a - b) + a - b = a - b(\dots\dots\dots)$
- ☐ a $x - y$ ☐ b $x + y$ ☐ c $x + y - 1$ ☒ d $x + y + 1$
- 44) $(2^{x+3} - 2^{x+1}) \div 2^x = \dots\dots\dots$
- ☐ a 8 ☒ b 6 ☐ c 8 ☐ d 16
- 45) If the probability that a pupil succeeds is 80 %, then the probability of his failure is
- ☐ a 0.8 ☐ b 0.02 ☒ c 0.2 ☐ d 0.08
- 46) If $2^{x-2} = 2^{1-2x}$, then $x = \dots\dots\dots$
- ☐ a 2 ☐ b $\frac{1}{2}$ ☒ c 1 ☐ d zero
- 47) The S.S of the equation: $\frac{4}{x} = \frac{x}{16}$, in R is
- ☐ a {4, -4} ☐ b {8} ☒ c {8, -8} ☐ d {64}
- 48) If $x + y = 3$, $x^2 - xy + y^2 = 12$, then $x^3 + y^3 = \dots\dots\dots$
- ☐ a 4 ☒ b 36 ☐ c 9 ☐ d 24
- 49) If $2^x = 3$, then $2^{1-2x} = \dots\dots\dots$
- ☐ a $\frac{1}{9}$ ☒ b $\frac{2}{9}$ ☐ c $\frac{1}{3}$ ☐ d $\frac{2}{3}$
- 50) If $x^3 + y^3 = 24$, $x + y = 6$, then $x^2 - xy + y^2 = \dots\dots\dots$
- ☒ a 4 ☐ b 12 ☐ c 18 ☐ d 30



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51 If $11^{x+2} = 1$, then $x = \dots\dots\dots$

- (a) 1 (b) -2 (c) 2 (d) 7

52 If $(2a - 5)(3a - 2) = 6a^2 + k a + 10$, then $k = \dots\dots\dots$

- (a) 15 (b) 19 (c) -19 (d) 4

53 Sixth the number: $2^{12} \times 3^{12}$ is $\dots\dots\dots$

- (a) 6^2 (b) 6^4 (c) 6^{11} (d) 6^{23}

54 The S.S. of the equation: $X^2 + 9 = 0$ in R is $\dots\dots\dots$

- (a) {3} (b) {3, -3} (c) {-3} (d) \emptyset

55 $3^x \times 3^x \times 3^x = \dots\dots\dots$

- (a) 3^{x+3} (b) 9^x (c) 3^{3x} (d) 27^{3x}

56 If $x^3 + 27 = (x + 3)(x^2 + k + 9)$, then $k = \dots\dots\dots$

- (a) $-6x$ (b) $-3x$ (c) $3x$ (d) $6x$

57 If $3^{2+x} = 5^{x+2}$, then $7^{x+2} = \dots\dots\dots$

- (a) 7 (b) -7 (c) -14 (d) 1

58 If $(X + 3)$ is one factor of the expression : $x^2 + x - 6$, then the other factor is $\dots\dots\dots$

- (a) $x + 3$ (b) $x - 4$ (c) $x + 1$ (d) $x - 2$

59 If $6^x = 11$, then $6^{x+1} = \dots\dots\dots$

- (a) 12 (b) 22 (c) 66 (d) 72

60 For the expression: $x^2 - 2x - k$ can be factorized, then $k \neq \dots\dots\dots$

- (a) 8 (b) 3
(c) 6 (d) 15



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Q2: COMPLETE THE FOLLOWING

- 1 The expression : $9x^2 + 16$ can be factorized as a perfect square by adding the term ...**24x**..... and its additive inverse.
- 2 The S.S. of the equation: $3x^2 - x = 0$ in R is **$\{0, \frac{1}{3}\}$**
- 3 If the solution set of the inequality $X < k$ in N is $\{0, 1, 2\}$, then $k =$...**3**..... .
- 4 $\sqrt{2} \times (\sqrt{2})^2 \times (\sqrt{2})^3 =$...**8**..... (in the simplest form)
- 5 The S.S. of : $2X^2 + 18 = 0$ in R is **\emptyset**
- 6 $8x^3 -$...**27**..... = (**2x**..... - **3**.....)(**4x²**..... + **6x**..... + 9)
- 7 If a and b are the two square roots of c where $c \neq 0$, then $a \div b =$...**-1**..... .
- 8 If the probability that a pupil succeeds is 0.4, then the probability of his failure is ...**60**..... %
- 9 $3^2 + 3^2 + 3^2 =$... **$3^3 = 27$**
- 10 If $2^x = 3$, then $8^{-x} =$... **$\frac{1}{27}$**
- 11 If $(X - 5)$ is a factor of the expression : $x^2 - 10x + 25$, then the other factor is (**x - 5**).....
- 12 The sum of the two square roots of the number 16 is ~~zero~~..... .
- 13 If x , y are two real numbers where $xy = 0$, then $x =$ **0**..... or $y =$ **0**.....
- 14 A bag has cards numbered from 0 to 10, if a card is drawn randomly, then the probability that the card carries an even prime number is ... **$\frac{1}{11}$**
- 15 If the expression: $x^2 + 4x + a$ is a perfect square, then $a =$...**4**.....
- 16 $a^2 - 6a +$...**9**..... (Complete to be perfect square)
- 17 $3^x = 7$, then $3^{x+2} =$...**63**.....



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- 18) In the experiment of throwing a fair die and observing the number on the upper face, then the probability of getting a number greater than 4 is $\frac{1}{3}$.
- 19) $2^2 + 2^2 = 2^3$.
- 20) The S.S of: $x(x - 2)(x + 3) = 0$ in R is $\{0, 2, -3\}$.
- 21) If $2^x = 3$, $2^y = 5$, then $4^{2x+y} = 2025$.
- 22) The quotient: $x^3 - 8$ by $x - 2$ is $(x^2 + 2x + 4)$ (when $\neq 2$)
- 23) If $x^2 - K = (x - 3)(x + 3)$, Then the value of K = 9.
- 24) If $x - y = 5$, $x^2 + xy + y^2 = 7$, then $3x^3 - 3y^3 = 105$.
- 25) The age of a man now is X years, then his age after 7 years is $x + 7$ years.
- 26) If $5a^2 - 5b^2 = 100$, $a - b = 4$, Then $a + b = 5$.
- 27) $x(y - z) + m(y - z) = (y - z)(x + m)$.
- 28) The S.S. of the equation: $(X - 3)(X + 1) = 0$ is $\{3, -1\}$ ($x \in R$)
- 29) If $7^{1-x} = 3^{1-x}$, then $x = 1$.
- 30) $4x^2 + 28x + 49$ (Complete to be perfect square)
- 31) If $3^{x+2} = 18$, then $(81)^x = 16$.
- 32) If $0 \leq P(A) \leq 1$ where A is an event.
- 33) If $x^2 + y^2 = 21$, $xy = 3$, then $(x + y)^2 = 27$.
- 34) If $x^2 - 2xy - 3y^2 = 8$, $x + y = 4$, then $x - 3y = 2$.
- 35) The degree of the algebraic term $-5x^3y$ is fourth degree.



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- 36 If the probability that the student is absent in a school is 0.32, and the number of students of this school is 600, then the number of the present students that day is students.
- 37 If $3^{n+1} = 6$, then $3^n = \dots\dots\dots$
- 38 + $a^6 = a^6$, $a \neq 0$
- 39 $x^2 + \dots\dots\dots + 35 = (x + \dots\dots\dots)(\dots\dots\dots + 5)$
- 40 - $18y^2 + 81$ (Complete to be perfect square)
- 41 $x^3 - 8 = (\dots\dots\dots) (x^2 + 2x + \dots\dots\dots)$
- 42 $3^{10} \times 3^{-10} = 9^{\dots\dots\dots}$
- 43 The solution set of the equation: $X^2 + 25 = 0$ in R is \emptyset
- 44 If $x + y = 5$, then $8x + 8y = \dots\dots\dots$
- 45 If $a^2 - b^2 = a + b$, then $a - b = \dots\dots\dots$
- 46 If $2^{x-5} = (3 - \sqrt{5})(3 + \sqrt{5})$, then $x^2 = \dots\dots\dots$
- 47 If $6^x = 7$, then $6^{x-2} = \dots\dots\dots$
- 48 If $xy + 3x + yz + 3z = 15$, $y + 3 = 5$, then $x + z = \dots\dots\dots$
- 49 Half of $4^{20} = \dots\dots\dots$
- 50 If $4^{x-29} = \frac{1}{16}$, then $\sqrt{x} = \dots\dots\dots$

اللهم اجعل هذا العمل خالصا لوجهك الكريم واكتب له القبول
والنفع يا كريم يا وهَّاب.



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Q3: ANSWER THE FOLLOWING

- 1 If $(x + 1)$ is a factor of the expression: $5x^2 - 2x - 7$, then find the second factor

.....
(5x - 7)
.....

- 2 A positive integer, if we add its square to its triple, the result will be 18
What is this integer ?

.....
number is 3
.....

- 3 In the experiment of composing 2-digit different number from the digit
{1, 2, 3, 4}. Find the sample space then Find the probability of getting:

a A number its tens is even $\frac{1}{2}$ $S = \{12, 13, 14, 21, 23, 24, 31, 32, 34, 41, 42, 43\}$

b A number both units and tens are even. $\frac{1}{6}$

- 4 Factorize each of the following completely:

a $xy + 5x + 7y + 35$

(y + 5)(x + 7)

b $81x^4 + 4y^4$

(9x² + 2y² + 6xy)(9x² + 2y² - 6xy)

c $ax - 7a + 3x - 21$

(x - 7)(a + 3)

- 5 If $\frac{6^{2n} \times 2^{2n}}{4^{2n} \times 3^{2n+4}} = 9^{-x}$, then find value of x

.....
x = 2
.....

- 6 Find the S.S. of the equation in R:

a $x^2 - 8x = -15$ {3, 5}

b $x^2 + 8x = 9$ {-9, 1}

c $x^2 + 12 = 8x$ {6, 2}

d $(2x + 1)^2 = (3x - 1)^2$ {0, 2}



7 Find in R the S.S of the following:

a) $x^2 - 8x + 12 = 0$

.....
 $\{6, 2\}$

b) $x^2 - 9x = 36$

.....
 $\{-3, 12\}$

c) $12x^2 = 47x - 45$

.....
 $\{\frac{9}{4}, \frac{5}{3}\}$

d) $5x^2 + 12x = 44$

.....
 $\{2, -\frac{22}{5}\}$

e) $x(x + 2) = 15$

.....
 $\{-5, 3\}$

f) $6x^2 - 7x - 3 = 0$

.....
 $\{\frac{3}{2}, -\frac{1}{3}\}$

8 Find the positive real number that if its square is added to five times of it, the result equals 36

.....
 The number is 4

9 A box contains 7 red balls, 8 green balls and 5 yellow balls. One ball is drawn randomly. Find the probability of getting :

a) A green ball. $\frac{2}{5}$

b) A ball not yellow. $\frac{3}{4}$

c) A red ball. $\frac{7}{20}$

f) A blue ball. zero

10 Prove that: $\frac{(\sqrt{2})^2 \times 2^{1-x} \times 12^{2x-1}}{8^x \times 9^x} = \frac{1}{3}$, $\frac{(27)^{x-1} \times 8^x}{(2\sqrt{2})^{2x} \times (3\sqrt{3})^{2x}} = \frac{1}{3}$

AHMED NASSR
 MATH TEACHER

11 Find the value of n in each of the following:

a) $\frac{2^n \times 9^{n+1}}{(18)^n} = 3^n$

.....
 $n = 2$

b) $\frac{(12)^{n-1}}{2^{n-1} \times 3^{n-1}} = 1$

.....
 $n = 1$

12 Divide the number 20 into two numbers whose product is 75

.....
 numbers are 5, 15



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13 Factorize each of the following completely:

a) $x^2 + 13x - 30$

$(x - 2)(x + 15)$

b) $3x^3 - 81$

$3(x - 3)(x^2 + 3x + 9)$

c) $2x^2 + 7x + 3$

$(2x + 1)(x + 3)$

d) $x^4 + 64y^4$

$(x^2 - 4xy + 8y^2)(x^2 + 4xy - 8y^2)$

e) $x^3 + 8$

$(x + 2)(x^2 - 2x + 4)$

f) $x^2 - 10x - 24$

$(x + 2)(x - 12)$

g) $(78)^2 - (77)^2$

$(78 - 77)(78 + 77)$

h) $2 - 2(x - 1)^3$

$2(2 - x)(x^2 - x + 1)$

i) $(a + b)^2 - 4$

$(a + b + 2)(a + b - 2)$

14 If $8^{4x-1} = 32$, then find the value of x ?

$\frac{2}{3}$

15 A box contains 30 cards numbered from 1 to 30, a card is drawn randomly. Calculate the probability of drawing a card carrying:

a) An odd number. $\frac{1}{2}$

b) A number divisible by 5 $\frac{1}{5}$

c) A perfect square $\frac{1}{6}$

16 If $\frac{7^x \times 6^x}{14^2} = 3^{2-m}$, then find the value of $x + m$?

$m + x = 2$

17 If $xy = 8$, find the numerical value of the expression $(x + y)^2 - (x - y)^2$

32

18 A positive integer, if we add its square to its triple, the result will be 18 What is this integer?

The number is 3



19 Factorize completely each of the following:

a) $x^3 - 8$

b) $x^2 - 10xy + 25y^2 - 36$

c) $3x^2 + 7x + 2$

$(x - 2)(x^2 + 2x + 4)$

$(x - 5y - 6)(x - 5y + 6)$

$(3x + 1)(x + 2)$

d) $xy - 5y + 6x - 30$

e) $x^2 + 6xy + 9y^2 - 49a^2$

f) $10x^2 - 7x - 12$

$(x - 5)(y + 6)$

$(x + 3y - 7a)(x + 3y + 7a)$

$(2x - 3)(5x + 4)$

20 A set of cards numbered from 1 to 10, if one card is drawn from them at random, find the probability that the drawn card carries:

a) A prime number $\frac{2}{5}$

b) A number greater than 7 $\frac{3}{10}$

21 Simplify: $\frac{3^{2x+1} \times 25^x}{15^{2x}}$

$= 3$

22 If $3^{x+1} = 81$, $4^{x+y} = 1$, then find the value of x and y?

$x = 3$

$y = -3$

23 Find in the simplest form: $\frac{4^{x+1} \times 9^{2-x}}{6^{2x}}$, then find the value of the result when $x = 1$

at $x = 1$, the value is 4

24 A positive integer, its square is more than its 3 times by 40, Find the number?

The number is 8

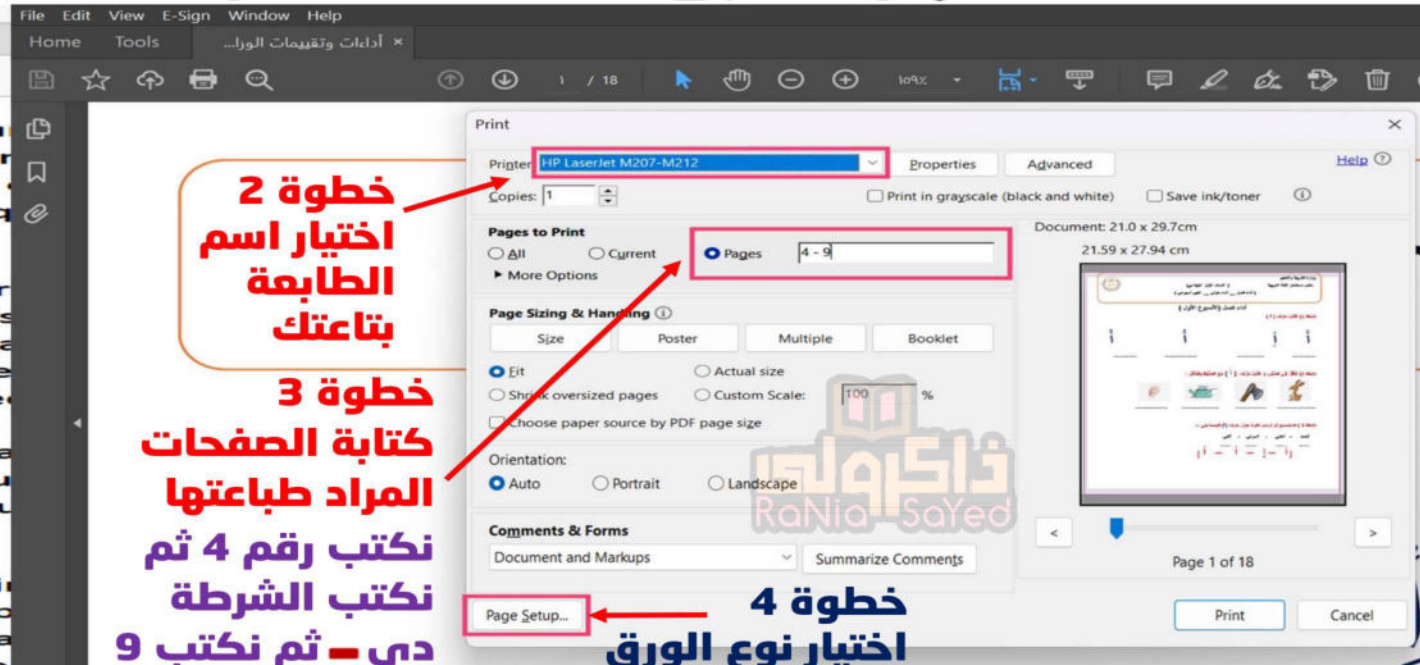
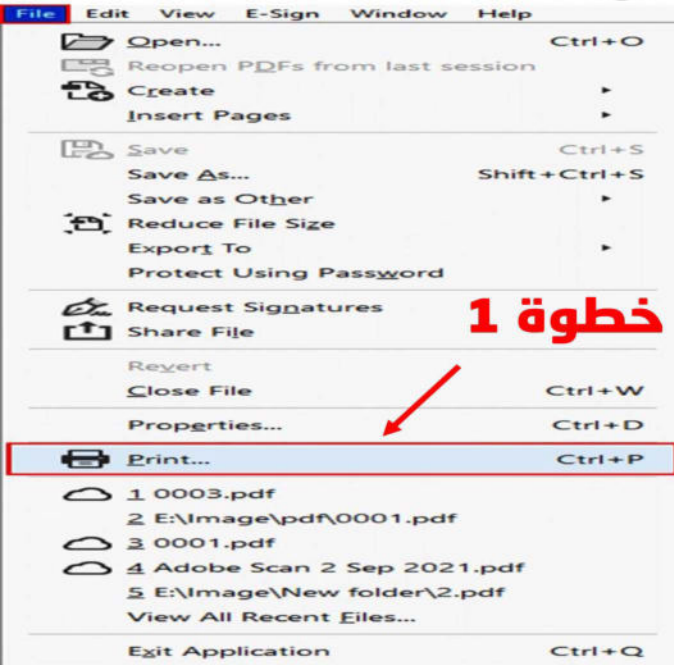
25 A rectangle with a length more than its width by 4 cm. If its area is 21 cm^2 , Find its dimensions.

Width = 3, Length = 7



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كيفية طباعة صفحات معينة من ملف معين مثلا ازاي نطبع الصفحات من صفحة 4 الى صفحة 9



حمل الآن

مجاناً وحصرياً

المراجعة رقم (2)

الترم الثاني





Question (1) Choose the correct answer.

1) Any number other 0 with indices 0 equals

- A) 1 B) 2 C) 3 D) 10

2) The expression $X^2 + 7X + a$ can be factorized, Then a maybe equal

- A) 8 B) 10 C) 18 D) 49

3) The expression $X^2 - 3X + a$ can be factorized, Then a maybe equal

- A) 1 B) 2 C) 4 D) 6

4) The expression $X^2 - aX + 12$ can be factorized, Then a maybe equal

- A) 1 B) 4 C) 7 D) -1

5) The expression $X^2 - X - a$ can be factorized, Then a maybe equal

- A) 4 B) 9 C) 16 D) 30

6) The expression $X^2 + aX + 25$ is a perfect square, Then a maybe equal

- A) 5 B) 10 C) ± 5 D) ± 10

7) The expression $X^2 + 14X + a$ is a perfect square, Then a maybe equal

- A) 2 B) 7 C) 14 D) 49

8) The expression $36X^2 + aX + 1$ is a perfect square, Then a maybe equal

- A) 6 B) 12 C) ± 6 D) ± 12

9) If $a^2 + 2ab + b^2 = 25$, Then $a + b =$

- A) 5 B) -5 C) ± 5 D) ± 10

10) If $X^2 - a = (X - 3)(X + 3)$, Then $a =$

- A) 0 B) 3 C) 6 D) 9

11) If $X^2 + M - 16 = (X - 4)(X + 4)$, Then $M = \dots\dots\dots$

- A) 0 B) 3 C) 6 D) 9

12) If $(50)^2 - (40)^2 = 10a$, Then $a = \dots\dots\dots$

- A) 90 B) 900 C) 1000 D) 9000

13) If $a^2 - b^2 = 30$, $a - b = 5$, Then $a + b = \dots\dots\dots$

- A) 0 B) 3 C) 6 D) 9

14) If $X + Y = 4$ and $X^2 - XY + Y^2 = 9$, Then $X^3 + Y^3 = \dots\dots\dots$

- A) 18 B) 27 C) 36 D) 40

15) If $X^3 - Y^3 = 48$ and $X^2 + XY + Y^2 = 8$, Then $X - Y = \dots\dots\dots$

- A) 0 B) 3 C) 6 D) 9

16) If $X^3 - a^3 = (X - a)(X^2 + 3X + a^2)$, Then $a = \dots\dots\dots$

- A) 0 B) 3 C) 6 D) 9

17) $a(c + d) - b(c + d) = 15$, $(c + d) = 5$, Then $a - b = \dots\dots\dots$

- A) 0 B) 3 C) 6 D) 9

18) $ax + ay + bx + by = 28$, $(a + b) = 7$, Then $(x + y) = \dots\dots\dots$

- A) 3 B) 4 C) 5 D) 6

19) $x^3 - 3x^2 + 27 - 9x = 0$, $(x - 3)^2 = 9$, Then $x + 3 = \dots\dots\dots$

- A) 0 B) 3 C) 6 D) 9

21) The S.S of $x^2 - 16 = 0$ in R is $\dots\dots\dots$

- A) $\{4\}$ B) $\{-4\}$ C) $\{-4, 4\}$ D) \emptyset

22) The S.S of $x^2 + 16 = 0$ in R is $\dots\dots\dots$

- A) $\{4\}$ B) $\{-4\}$ C) $\{-4, 4\}$ D) \emptyset

23) The S.S of $x^2 - 16 = 0$ in N is

- A) {4} B) {-4} C) {-4 , 4} D) \emptyset

24) The S.S of $(a - 6)^0 = 0$ in R is

- A) {6} B) {0} C) $R - \{6\}$ D) R

25) The S.S of $x(x-3) = 5x$ in R is

- A) {3} B) {0 , 3 , 5} C) {3 , 5} D) {0 , 8}

25) The S.S of $3(a + 7)(a - 2) = 0$ in R is

- A) {-7} B) {-7 , 3 , 2} C) {-7 , 2} D) {-2 , 7}

26) The S.S of $x^2 - 6x = 0$ in R is

- A) {0} B) {0 , 6 , -6} C) {0 , 6} D) {6 , -6}

27) Twice of the cube of the number m is

- A) 2m B) $[2m]^3$ C) $2m^3$ D) m^6

28) If the age of Maher is c, Then his age before 5 years is

- A) $c + 5$ B) $c - 5$ C) 5c D) $\frac{c}{5}$

29) If the age of Maher is c, Then his age after 5 years is

- A) $c + 5$ B) $c - 5$ C) 5c D) $\frac{c}{5}$

30) If the age of Mohab is b, and his father was born before him 25 years, Then Mohab father's age is

- A) $b + 25$ B) 25 C) $b - 25$ D) 25b

27) Square of 2 times the number m is

- A) 2m B) $[2m]^2$ C) $2m^2$ D) m^4

28) Any number other 0 with power 0 =

- A) 0 B) 1 C) 2 D) -1

29) $(-5)^{-1} = \dots\dots\dots$

- A) 5 B) $\frac{-1}{5}$ C) -5 D) $\frac{1}{5}$

30) $(-a)^{2n}$, Then the result must be

- A) positive B) negative C) 0

31) $(3)^2 = \dots\dots\dots$

- A) -9 B) $\frac{1}{9}$ C) 3^{-2} D) $\frac{1}{3^{-2}}$

32) $(-a)^n$ and $n = 0$, Then the result must be

- A) positive B) negative C) 0

33) $(-a)^n$ and n is an odd number, Then the result must be

- A) positive B) negative C) 0

34) Two integers their sum is 15, one of them is z then the other is

- A) z B) $2z$ C) $15-z$ D) $15+z$

35) Two integers their difference is 8, one of them is b then the other is

- A) $b-8$ B) $2b-8$ C) 8 D) $8b$

36) Two integers one of them is fifths the other, if the first is t then the other is

- A) $5t$ B) $\frac{1}{5}t$ C) $\frac{2}{5}t$ D) $\frac{1}{5}x$

37) The age of man is d then his age after 10 years is

- A) $10d$ B) $10-d$ C) $10+d$ D) $\frac{d}{10}$

38) $(0.1)^2 = \dots\dots\dots$

- A) 0.1 B) 10^2 C) 10^{-2} D) 10

39) $3^2 \times 3^3 = \dots\dots\dots$

A) 3

B) 3^5

C) 3^6

D) 6^3

40) $5^3 \times 5^4 = \dots\dots\dots$

A) 5

B) 5^5

C) 5^7

D) 5^{12}

41) $4^2 \div 4^3 = \dots\dots\dots$

A) 4^{-1}

B) 4^5

C) 4^6

D) 4

42) $8^2 \div 2^3 = \dots\dots\dots$

A) 2^{-1}

B) 2^3

C) 2^6

D) 2

43) $(2 \times 3)^3 = \dots\dots\dots$

A) 2^6

B) 3^6

C) 6^3

D) 5^3

44) $5^4 + 5^4 + 5^4 + 5^4 + 5^4 = \dots\dots\dots$

A) 5^6

B) 5^4

C) 5^5

D) 20^4

45) The fifths of the number $5^{10} = \dots\dots\dots$

A) 5^2

B) 1^{10}

C) 5^9

D) 25^{10}

46) $2^4 + 2^4 + 2^4 + 2^4 = \dots\dots\dots$

A) 2^6

B) 2^4

C) 2^5

D) 8^4

47) The quarter of the number $4^8 = \dots\dots\dots$

A) 4^2

B) 1^8

C) 4^{16}

D) 4^7

48) Six times the number $6^3 = \dots\dots\dots$

A) 6^2

B) 6^4

C) 6^6

D) 6^{18}

49) Twelve times the number $4^5 \times 3^5 = \dots\dots\dots$

A) 12^5

B) 12^{12}

C) 12^6

D) 12^7

50) Sixths the number $2^4 \times 3^4 = \dots\dots\dots$

A) 6^3

B) 6^5

C) 6^8

D) 36^7

51) $(\sqrt{3})^4 \times (\sqrt{3})^2 = 3^{\dots\dots\dots}$

A) 0

B) 1

C) 2

D) 3

52) $\frac{(\sqrt{6}^7)^{11}}{(\sqrt{6}^{11})^7} = \dots\dots\dots$

A) 1

B) $\sqrt{6}$

C) 6

D) $\sqrt{6}^{77}$

53) $[(\sqrt{8}^8)]^3 - [(\sqrt{8}^3)]^8 = \dots\dots\dots$

A) 0

B) 1

C) 8

D) $\sqrt{8}$

54) $\frac{(\sqrt{7}^4)^9}{(\sqrt{7}^{12})^3} = \dots\dots\dots$

A) 1

B) $\sqrt{7}$

C) 7

D) $\sqrt{7}^{13}$

55) $[(\sqrt{10}^8)]^3 - [(\sqrt{10}^4)]^6 = \dots\dots\dots$

A) 0

B) 1

C) 10

D) $\sqrt{10}$

56) If $3^a = 4$, Then $3^{a+1} = \dots\dots\dots$

A) 3

B) 4

C) 7

D) 12

57) If $2^a = 3$, Then $4^{a+1} = \dots\dots\dots$

A) 3

B) 7

C) 12

D) 36

58) If $3^a = 27$, Then $a = \dots\dots\dots$

A) 0

B) 1

C) 2

D) 3

59) If $4^a = 64$, Then $a = \dots\dots\dots$

A) 2

B) 3

C) 4

D) 5

60) If $3^a = 3$, Then $a = \dots\dots\dots$

- A) 0 B) 1 C) 2 D) 3

61) If $3^a = 1$, Then $a = \dots\dots\dots$

- A) 0 B) 1 C) 2 D) 3

62) If $3^a = \frac{1}{9}$, Then $a^2 = \dots\dots\dots$

- A) 3 B) 4 C) 9 D) -9

63) If $8^{a+3} = 7^{a+3}$, Then $a = \dots\dots\dots$

- A) 2 B) 3 C) -2 D) -3

64) If $\left(\frac{3}{5}\right)^b = \frac{5}{3}$, Then $b = \dots\dots\dots$

- A) 0 B) 1 C) -1 D) $\frac{3}{5}$

65) If $\left(\frac{2}{3}\right)^b = \frac{81}{16}$, Then $b = \dots\dots\dots$

- A) -1 B) -2 C) -3 D) -4

66) $2^{x-2} = 2^{1-2x}$, Then $x = \dots\dots\dots$

- A) 0 B) 1 C) 2 D) $\frac{1}{2}$

67) $0.005 \times 0.002 = 10^{\dots\dots\dots}$

- A) 2 B) 5 C) -2 D) -5

68) $5^a = 9$ and $9^b = 125$, Then $ab = \dots\dots\dots$

- A) 3 B) 5 C) 9 D) 125

69) $2^{x-1} \times 3^{1-x} = \frac{9}{4}$, Then $x = \dots\dots\dots$

- A) 1 B) 3 C) -1 D) -3

70) Third of $3^{n-2} = 27$, Then $n = \dots\dots\dots$

- A) 3 B) 4 C) 5 D) 6

71) $2^a \times 2^6 = 1$, Then $a = \dots\dots\dots$

- A) 0 B) 1 C) 6 D) -6

72) $4^a + 4^a + 4^a + 4^a = 1$, Then $a = \dots\dots\dots$

- A) 0 B) 1 C) 2 D) -1

73) $n^{n+2} = 4^{n+2}$, Then $n = \dots\dots\dots$

- A) 0 B) 2 C) -2 D) 10

74) $3 \times 4 - 12 \div 3 = \dots\dots\dots$

- A) 0 B) 8 C) 24 D) -24

75) $2^6 \div 8 - 6 - 3 \div 3 = \dots\dots\dots$

- A) 0 B) 1 C) 30 D) $\frac{-1}{3}$

76) $7 - [10 - (-8)] + 11 = \dots\dots\dots$

- A) 0 B) 1 C) 16 D) 17

77) $[3 \times 5 - 7] - [3^2 - (-8)] + 3^2 = \dots\dots\dots$

- A) 0 B) 1 C) 16 D) 17

78) $5 \times 8 - 10 \div \frac{1}{2} - 20 = \dots\dots\dots$

- A) 0 B) 1 C) 15 D) 17

79) $3^2 + 5 - 3 \times 7 + 5 = \dots\dots\dots$

- A) 0 B) 2 C) -2 D) 82

80) $(2^2 + 6) \times 5 - 7^2 = \dots\dots\dots$

- A) 0 B) 1 C) 16 D) 17

81) $\frac{5^3 - (4 \times 6 + 1)}{4^2 - 2 \times 3} = \dots\dots\dots$

A) 10

B) 12

C) 15

D) 17

82) $(3^3 + 3) \div 10 = \dots\dots\dots$

A) 0

B) 1

C) 2

D) 3

83) $(8^2 \div 4) \div 8 - 2 = \dots\dots\dots$

A) 0

B) 1

C) 16

D) 17

84) The probability of the impossible event is

A) 0

B) 1

C) -1

D) $\frac{1}{2}$

85) The probability of the certain event is

A) 0

B) 1

C) -1

D) $\frac{1}{2}$

86) The sum of all probabilities of all outcomes in a random experiment =

A) 0

B) 1

C) -1

D) $\frac{1}{2}$

Question (2) Complete the Following.

1) Any number divided by itself equals

2) Is the additive identity.

3) $\frac{15}{\dots\dots} = 5$

4) 0 divided by any number equals

5) The number which has only 2 factors is

6) The number which has more than 2 factors is

7) The smallest odd prime number is

8) The only even prime number is

- 9) Means ordering numbers from the greatest to the smallest.
- 10) Means ordering numbers from the smallest to the greatest.
- 11) is the multiplicative identity.
- 12) $X^2 - 11X + 18 = (X \dots\dots\dots) (X \dots\dots\dots)$
- 13) $X^2 + 5X + 6 = (X \dots\dots\dots) (X \dots\dots\dots)$
- 14) $X^2 - 8X + 12 = (X \dots\dots\dots) (X \dots\dots\dots)$
- 15) $X^2 + 5X + 6 = (X \dots\dots\dots) (X \dots\dots\dots)$
- 16) $5a^2 - 2a - 7 = (\dots\dots\dots) (\dots\dots\dots)$
- 17) $3m^2 + 10mn + 8n^2 = (\dots\dots\dots) (\dots\dots\dots)$
- 18) $3b^2 - 7b + 2 = (\dots\dots\dots) (\dots\dots\dots)$
- 19) $5a^2 - 3ab - \dots\dots\dots = (a - b) (\dots\dots\dots + \dots\dots\dots)$
- 20) $m^2 - 2m + 1 = (\dots\dots\dots) (\dots\dots\dots)$
- 21) $a^2 - 9^2 = (\dots\dots\dots) (\dots\dots\dots)$
- 22) $4c^4 - 12c^2d + 9d^2 = (\dots\dots\dots) (\dots\dots\dots)$
- 23) $(X + \dots\dots\dots) (\dots\dots\dots - 2Y) = 4X^2 - \dots\dots\dots$
- 24) $(\dots\dots\dots + 2C) (\dots\dots\dots - 2C) = 25B^2 - \dots\dots\dots$
- 25) $a + b = 5(a - b) = 10$, Then $a^2 - b^2 = \dots\dots\dots$
- 26) If $3(X - Y) (X + Y) = 12$, Then $X^2 - Y^2 = \dots\dots\dots$
- 27) If $m^2 - n^2 = 63$ and $m + n = 7$, Then $\sqrt{m - n} = \dots\dots\dots$
- 28) $(99)^2 - (98)^2 = \dots\dots\dots$
- 29) $a^3 - 1 = (a - 1) (\dots\dots\dots)$
- 30) $m^{18} + m^{15} = \dots\dots\dots (\dots\dots\dots) (\dots\dots\dots)$

- 31) If $(a - b)$ is a factor of the expression of difference between two square then the other factor is
- 32) If $(a - b)$ is a factor of the expression of difference between two cube then the other factor is
- 33) If $(a - d) = 6$ and $(b - h) = 5$, Then $ab - bd + ah - dh = \dots\dots\dots$
- 34) If $(c + d) = 9$ and $(c + h) = 3$, Then $c^2 + cd + dh + ch = \dots\dots\dots$
- 35) Middle term in perfect square trinomial =
- 34) In perfect square trinomial the first term and the third term must be
- 35) $4x^4 + y^4 = \dots\dots\dots$
- 36) $4c^4 + 1 = \dots\dots\dots$
- 37) $m^4 + 64n^4 = \dots\dots\dots$
- 38) The degree of the equation is the
- 39) The S.S of $m^2 + 9 = 0$ in R is
- 40) The S.S of $4b^2 = 49$ in R is
- 41) The S.S of $b^2 - 36 = 0$ in n is
- 42) The S.S of $6z^2 - 7z - 3 = 0$ in R is
- 43) The S.S of $c(c + 3) = 10$ in R is
- 44) The S.S of $5(z^2 + 3) = 60$ in R is
- 45) The S.S of $2m^2 - 128 = 0$ in N is
- 46) The S.S of $4b^2 = 49$ in Z is
- 47) If -5 is a root for the equation $a^2 + 2a - 15 = 0$, Then the other root is
- 48) The additive inverse of n is

- 49) The multiplicative inverse of z is
- 50) More than twice the number k by 6 is
- 51) The additive inverse of the multiplicative inverse of x is
- 52) Two integers their sum is 32, one of them is z then the other is
- 53) Two integers their difference is 9, one of them is b then the other is
- 54) Two integers one of them is sixths the other, if the first is t then the other is
- 55) The age of man is d then his age after 9 years is
- 56) Any number other 0 with power 0 =
- 57) $(-7)^{-1} = \dots\dots\dots$
- 58) $(-a)^{2n}$, Then the result must be
- 59) $(-a)^n$ and $n = 0$, Then the result must be
- 60) $(-a)^n$ and n is an odd number, Then the result must be
- 61) $(0.5)^2 = \dots\dots\dots$
- 62) $(0.01)^{-2} = \dots\dots\dots$
- 63) $7^2 \times 7^3 = \dots\dots\dots$
- 64) $3^3 \times 3^4 = \dots\dots\dots$
- 65) $2^8 \div 4^3 = \dots\dots\dots$
- 66) $5^7 \div 5^3 = \dots\dots\dots$
- 67) $(4 \times 3)^3 = \dots\dots\dots$
- 68) $6^4 + 6^4 + 6^4 + 6^4 + 6^4 + 6^4 = \dots\dots\dots$
- 69) The quarter of the number $4^{16} = \dots\dots\dots$
- 70) $3^4 + 3^4 + 3^4 + 3^4 + 3^4 + 3^4 = \dots\dots\dots$

- 71) The third of the number $3^8 = \dots\dots\dots$
- 72) Six times the number $36^2 = \dots\dots\dots$
- 73) Twelve times the number $4^0 \times 3^5 = \dots\dots\dots$
- 74) Sixths the number $4^2 \times 3^4 = \dots\dots\dots$
- 75) $(\sqrt{5})^6 \times (\sqrt{5})^2 = 5 \dots\dots$
- 76) $\frac{(\sqrt{7}^8)^0}{(\sqrt{7}^6)^8} = \dots\dots\dots$
- 77) $[(\sqrt{6}^3)]^6 - [(6^3)]^3 = \dots\dots\dots$
- 78) $\frac{(\sqrt{5}^4)^7}{(\sqrt{5}^{14})^2} = \dots\dots\dots$
- 79) $[(\sqrt{3}^8)]^0 - [(\sqrt{3}^0)]^6 = \dots\dots\dots$
- 80) If $5^a = 7$, Then $5^{a+1} = \dots\dots\dots$
- 81) If $3^a = 4$, Then $9^{a+1} = \dots\dots\dots$
- 82) $2^{b+3} = 32$, Then $5^b = \dots\dots\dots$
- 83) $3^{z+2} = 27$, Then $193^z = \dots\dots\dots$
- 84) $5^{125} = 5^{124} + \dots\dots\dots$
- 85) $(-5)^{23} \dots\dots\dots (2)^6$
- 86) Five times a number is 125, Then $\frac{2}{5}$ of this number is $\dots\dots\dots$
- 87) If $6^a = 36$, Then $a = \dots\dots\dots$
- 88) If $7^a = 343$, Then $a = \dots\dots\dots$
- 89) If $5^a = 5$, Then $a = \dots\dots\dots$
- 90) If $10^a = 1$, Then $a = \dots\dots\dots$

91) If $5^a = \frac{1}{125}$, Then $a^2 = \dots\dots\dots$

92) If $5^{a+7} = \frac{4^{a+7}}{7}$, Then $a = \dots\dots\dots$

93) If $\left(\frac{2}{9}\right)^b = \frac{9}{2}$, Then $b = \dots\dots\dots$

94) If $\left(\frac{4}{7}\right)^b = \frac{64}{343}$, Then $b = \dots\dots\dots$

95) $0.0050 \times 0.0020 = 10^{\dots\dots\dots}$

96) $2^a = 7$ and $7^b = 32$, Then $ab = \dots\dots\dots$

97) Quarter of $4^{n-2} = 256$, Then $n = \dots\dots\dots$

98) Quarter of $2^{n-3} = 32$, Then $n = \dots\dots\dots$

99) $5^a \times 5^8 = 1$, Then $a = \dots\dots\dots$

100) $3^{a+1} + 3^{a+1} + 3^{a+1} = 1$, Then $a = \dots\dots\dots$

101) $n^{n+2} = 4^{n+2}$, Then $n = \dots\dots\dots$

102) $10^{20} - 10^{19} = \dots\dots\dots$

103) $\frac{15+18}{18-15} = \dots\dots\dots$

104) $\frac{13 \times 2 - 6 + 4}{9-4} = \dots\dots\dots$

105) $[7^2 - 6^2] \div [3^2 - (-4)] + 3^2 = \dots\dots\dots$

106) $6 \times 7 - 10 \div \frac{1}{2} - 30 = \dots\dots\dots$

107) $8^2 + 4 - [(3 \times 7) + 7^2] = \dots\dots\dots$

108) $(2^2 + 6) \times 5 - 7^2 = \dots\dots\dots$

109) $\frac{4^3 - (4 \times 6)}{6^2} = \dots\dots\dots$

110) $[[[(5^3 + 3) \div 4] \div 4] \div 4] = \dots\dots\dots$

111) $2 [(5^2 + 1) - (4^2 - 1)] = \dots\dots\dots$

112) $\dots\dots\dots$ is a small part from a large society that looks like this society and represent it well and selected randomly.

113) $\dots\dots\dots$ is a sample whose are selected by a certain system or a method in selection.

114) Experimental probability = $\frac{\dots\dots\dots}{\dots\dots\dots}$

115) $\dots\dots\dots$ is the set of all possible outcomes of a random experiment.

116) $\dots\dots\dots$ is a subset of a sample space.

117) $P(A) = \frac{\dots\dots\dots}{\dots\dots\dots}$

118) The probability of the impossible event is $\dots\dots\dots$

119) The probability of the certain event is $\dots\dots\dots$

120) The probability of any event is between $\dots\dots\dots$

121) The sum of all probabilities of all outcomes in a random experiment = $\dots\dots\dots$

122) The probability of occurrence on an event is x, Then the probability of that doesn't occur = $\dots\dots\dots$

123) After throwing a fair die the probability of appearance number greater than 0 is $\dots\dots\dots$

124) After throwing a fair die the probability of appearance number greater than 5 is $\dots\dots\dots$

125) After throwing a fair die the probability of appearance number greater than 3 is $\dots\dots\dots$

126) If a coin is flipped once, Then the probability of appearance a tail is

127) After throwing a fair die the probability of appearance number smaller than 0 is

128) After throwing a fair die the probability of appearance number smaller than 6 is

129) If a coin is flipped two times, Then the probability of appearance a head is

130) After throwing a fair die the probability of appearance number greater than or equal 5 is

131) After throwing a fair die the probability of appearance number smaller than or equal 6 is

132) After throwing a fair die the probability of appearance an even number is

133) After throwing a fair die the probability of appearance an odd number is

134) After throwing a fair die the probability of appearance an even number greater than 3 is

135) After throwing a fair die the probability of appearance an odd number less than 2 is

136) After throwing a fair die the probability of appearance a prime number is

137) After throwing a fair die the probability of appearance an prime number greater than 3 is

138) After throwing a fair die the probability of appearance a number is divisible by 3 is

139) After throwing a fair die the probability of appearance a number is divisible by 6 is

140) For every event A, $P(A) = [.....,]$

Question (3) Essay problems.

1) The area of rectangle is $X^2 + 6X + 8 \text{ cm}^2$, and its width is $X + 2$, Find each of length and perimeter of the rectangle.

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2) Factorize each of the following.

A) $X^4 + 9X^2 + 18$.

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B) $X^2 (X - 23) + 60X$.

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C) $(X - 4)(X - 9) - 2(X + 5)$.

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D) $(X - 1)^2 - 2(X - 1) - 8$.

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3) The area of rectangle is $X^2+6X+8 \text{ cm}^2$, and its width is $X+2$, Find each of length and perimeter of the rectangle.

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4) Complete the missing term in each of the following trinomials to be a perfect square trinomial.

A) $4X^2$ + 1

B) $4X^2 + 28X +$

C) - $18Y^2 + 81$

5) Factorize each of the following.

A) $1 + 14X + 49X^2$.

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B) $\frac{1}{16}a^2 + \frac{1}{10}a + \frac{1}{25}$.

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C) $(X - y)^2 + 4XY$.

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6) Use factorization to get value of each of the following.

A) $(7.3)^2 + 2 \times 7.3 \times 2.7 + (2.7)^2$.

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B) $(99)^2 + 2 \times 99 \times 98 + (98)^2$.

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C) $25 + 2 \times 45 + 81$.

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7) If $XY = 8$, Find the numerical value of the expression $(X + Y)^2 - (X - Y)^2$.

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8) Use factorization to get value of each of the following.

A) $(77)^2 - (23)^2$.

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B) $(999)^2 - (1)^2$.

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9) Use the idea of factorizing the difference between two square for each of the following.

A) 31×29 .

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B) 103×97 .

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10) Factorize each of the following.

A) $16X^3Y^2 - 686Y^5$.

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B) $0.064a^3 - 0.027b^3$.

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C) $(m+3)^3 - 27$.

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D) $3 - 3(L+1)^3$.

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11) If $a^2 - b^2 = 20$, $a - b = 2$ and $a^2 - ab + b^2 = 28$, Find the value of $a^3 + b^3$.

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12) Factorize each of the following.

A) $x^2 - 2xz - 2xy + 4yz$.

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B) $8mn - 2m^2 + 12nl - 3ml$.

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C) $m^3 + m - 2$.

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12) Factorize each of the following completely.

A) $m^8 - 16n^8$.

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B) $a^2(9a^2 - 10b^2) + b^2$.

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13) Find S.S for each of the following equations in R.

A) $(2a - 1)^2 + (a - 1)^2 = 10$.

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B) $2x^3 - 8x = 0$.

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C) $a^2 - \frac{7a}{3} = -\frac{4}{3}$.

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14) When Sama was 4 years old his sister Marwa was half of her age, Find Marwa age when Sama become 100 years old.

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15) Two integer number, Their sum is 30 and their difference is 4, Find the two numbers.

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16) Find the number which if added to its twice become 45.

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17) Find the number which if added to its triple become 68.

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18) Find the three consecutive odd number which their sum is 39.

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19) Find the three consecutive even number which their sum is 66.

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20) Three brothers Ayman, Amgad and Bassim, The sum of their ages is 89 years, If Amgad was born before Bassim by 2 years and Bassim was born before Ayman by 6 years, Find the age of each one of them.

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21) If $X = \sqrt{3}$ and $Y = \sqrt{2}$, Find each of the following.

A) $X^4 - Y^4$

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B) $X^4 \div Y^4$

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22) The square of age of Ahmed now is more than three times his age four years ago by 192, Find his age now.

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23) Simplify each of the following.

A) $\frac{9^x \times 3^{x+2}}{27^x}$

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B) $\frac{10^2 \times 10^{-7}}{(0.1)^2 \times 0.001}$

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C) $\frac{36^n \times 5^{2n}}{30^{2n}}$

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24) Prove.

$$A) \frac{27^{x-1} \times 8^x}{(2\sqrt{2})^{2x} \times (3\sqrt{3})^{2x}} = \frac{1}{27}$$

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$$B) \frac{(\sqrt{3})^{2-n} \times 15^{n+2}}{(\sqrt{3})^{-n} \times 3^n \times 5^{n+2}} = 27$$

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25) Find the value of a in each of the following.

$$A) \frac{2^a \times 9^{a+1}}{18^a} = 3^a$$

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$$B) \frac{14^{2a} \times 4^{a+1}}{7^a \times 4 \times 16^a} = 7^2$$

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$$C) x^{a+3} - 1 = (a + 1)(a - 1)(a^4 + 1)(a^2 + 1)$$

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26) Simplify each of the following.

A) $\frac{2(\sqrt{3})^5 \div 3\sqrt{3}}{2\sqrt{3} + (\sqrt{3}-1)^2}$

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B) $\frac{(2\sqrt{2})^3 \times 3\sqrt{2}}{(\sqrt{6}+\sqrt{2})^2 - 2\sqrt{12}}$

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27) If $n = \sqrt{5}$ and $m = \sqrt{7}$, Find the numerical value for each of the following.

A) $\frac{n^4 - m^4}{n^2 + m^2}$

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B) $\frac{n^3 - m^3}{m + n}$

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28) The following table showing 100 student chooses favorite sport.

Favourite game					
	Football	Handball	Athletics	Tennis	Hockey
Number of students	44	27	12	4	13

A) Find the probability if the student prefers:

1) Football.

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2) Handball.

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3) Athletics.

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4) Tennis.

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5) Hockey.

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B) If the number of student is 1500, Find how many student prefers :

1) Football.

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2) Handball.

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3) Athletics.

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4) Tennis.

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5) Hockey.

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29) One card is selected randomly from 20 cards numbered from 1 to 20, Find the sample space and the probability of each of the following.

A) Getting an even number.

B) Getting an odd number.

C) Getting a prime number.

D) Getting a composite number.

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30) The set {1, 3, 6, 4} is used to write two-digit number, Find the sample space and the probability of each of the following.

A) Getting an even number.

B) Getting an odd number.

C) Getting a prime number.

D) the sum of two digits is 7.

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31) A bag contains congruent balls 3 of them are green, 4 of them are blue, 6 of them are black, the probability of selecting white balls is $\frac{1}{8}$ and the probability of selecting red balls is $\frac{1}{3}$, Find each of the following.

A) The number of white balls.

B) The number of red balls.

C) The probability of getting a green ball.

D) The probability of getting a blue ball.

E) The probability of getting a black ball.

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32) A class contains 100 students 60 of them succeeded in math, 80 of them succeeded in science, 50 of them succeeded in both, Find the probability of each of the following.

A) Students succeed in math.

B) Students fail in math.

C) Students succeed in science.

D) Students fail in science.

E) Students succeed in both.

F) Students fail in both.

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33) Drawing randomly a colored marble out of a bag containing 32 similar colored red, white, green and yellow, the probability of getting a red marbles is $\frac{3}{8}$, Estimate how many red marbles are in the bag.

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34) The following table shows that how the pupils goes to school.

Means of transport	Bicycle	Bus	Private car	On foot
The number	12	16	8	12

If the pupil is selected randomly, what is the probability of what the pupil:

A) goes to school by bus.

B) goes to school by foot.

C) goes to school by bicycles.

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حمل الآن

مجاناً وحصرياً

المراجعة رقم (3)

الترم الثاني



FIRST: ALGEBRA

Choose the correct answer :

1.	$(x + 2)^2 = \dots\dots\dots$ (a) $x^2 + 4$ (b) $x^2 - 4$ (c) $x^2 + 4x + 4$ (d) $x^2 - 4x + 4$
2.	The S.S. of the equation : $x^2 = 9$ in \mathbb{N} is (a) \emptyset (b) $\{-3\}$ (c) $\{3\}$ (d) $\{-3, 3\}$
3.	If $(x + 1)^2$ is one of the factors of the expression $(x^2 - 1)^2$, then the other factor is (a) $(x - 1)^2$ (b) $x - 1$ (c) $x^2 + 1$ (d) $x^2 - 1$
4.	The expression : $x^2 + kx + 36$ is a perfect square when k equals (a) ± 6 (b) ± 8 (c) ± 12 (d) ± 18
5.	If $x^3 y^{-3} = 8$, then $\frac{y}{x} = \dots\dots\dots$ (a) $\frac{1}{512}$ (b) $\frac{1}{8}$ (c) $\frac{1}{2}$ (d) 2
6.	The expression : $x^2 + 4x + a$ is a perfect square when a equals (a) 3 (b) 4 (c) 8 (d) 16
7.	The S.S. of the equation : $x^2 - x = 0$ is where $x \in \mathbb{R}$ (a) $\{0\}$ (b) \emptyset (c) $\{0, 1\}$ (d) $\{1\}$
8.	The S.S. of the equation : $x^2 - 5x + 6 = 0$ is where $x \in \mathbb{R}$ (a) $\{1, 6\}$ (b) $\{-1, -6\}$ (c) $\{2, 3\}$ (d) $\{-3, -2\}$
9.	The solution set of the equation : $x^2 + 25 = 0$ in \mathbb{R} is (a) $\{-5, 5\}$ (b) $\{5\}$ (c) $\{-5\}$ (d) \emptyset

Preparatory Two - Second Term Revision - 2023

10.	If the expression : $X^2 + aX + 9$ is a perfect square , then $a = \dots\dots\dots$ (a) 3 (b) 6 (c) 9 (d) 18
11.	If $(X - 1)$ is one factor of expression : $X^2 - 4X + 3$, then the other factor is (a) $X + 3$ (b) $X + 1$ (c) $X - 3$ (d) $X - y$
12.	If $\left(\frac{5}{3}\right)^X = \left(\frac{3}{5}\right)^2$, then $X = \dots\dots\dots$ (a) - 2 (b) 2 (c) $\frac{1}{2}$ (d) $-\frac{1}{2}$
13.	If $6^X = 7$, then $6^{X+1} = \dots\dots\dots$ (a) 42 (b) $\frac{7}{6}$ (c) 1 (d) 6
14.	$4^3 + 4^3 + 4^3 + 4^3 = \dots\dots\dots$ (a) 4^{12} (b) 4^9 (c) 4^4 (d) 4^{81}
15.	The solution set of equation : $X^2 - 5X + 4 = 0$ in \mathbb{R} is (a) $\{1, 4\}$ (b) $\{2, -2\}$ (c) \emptyset (d) $\{1\}$
16.	* If $X^2 + kX + 25$ is a perfect square , then $k = \dots\dots\dots$ (a) 5 (b) 10 (c) ± 10 (d) ± 5
17.	If $6^X = 7$, then $6^{X+1} = \dots\dots\dots$ (a) 8 (b) 13 (c) 36 (d) 42
18.	If the expression : $aX^2 + 12X + 9$ is a perfect square , then $a = \dots\dots\dots$ (a) 3 (b) 4 (c) 9 (d) 16
19.	If $XY = 3$, $(X + y)^2 = 16$, then $X^2 + y^2 = \dots\dots\dots$ (a) 4 (b) 10 (c) 13 (d) 8
20.	$3^{\text{zero}} + 3^{-1} - \left(\frac{1}{\sqrt{3}}\right)^2 = \dots\dots\dots$ (a) 3 (b) 1 (c) $\frac{1}{3}$ (d) 0
21.	* If $X + y = 3$, $X^2 - XY + y^2 = 5$, then $X^3 + y^3 = \dots\dots\dots$ (a) 15 (b) 25 (c) 8 (d) 7

22.	If $(x - 2)^0 = 1$, then $x \neq$	(a) 3	(b) 2	(c) 1	(d) -3
23.	If $5^x = 4$, then $5^{x-1} =$	(a) 1.25	(b) 0.8	(c) 0.125	(d) 0.08
24.	If $x = \frac{\sqrt{8}}{\sqrt{2}}$, then $x^{-1} =$	(a) 2	(b) - 2	(c) $\frac{1}{2}$	(d) $-\frac{1}{2}$
25.	$\left(\frac{\sqrt{5}}{3}\right)^{-2} =$	(a) $\frac{9}{5}$	(b) $-\frac{9}{5}$	(c) $-\frac{5}{9}$	(d) $\frac{5}{9}$
26.	* If the expression : $x^2 + 7x + a$ can be factorized , then a may be equal to	(a) 8	(b) 10	(c) 18	(d) 49
27.	If the probability that a student succeeds in a subject is 0.8 , then the probability of his failure is	(a) 0	(b) 1	(c) 0.2	(d) 0.8
28.	If a regular die is tossed once , then the probability of appearing the number 7 is	(a) $\frac{1}{7}$	(b) $\frac{1}{6}$	(c) 1	(d) 0

Complete each of the following :

1.	Letters of the word "Alminsora" are written in cards. If a card is drawn at random , then the probability that chosen card carries the letter "S" =
2.	If $x + y = 4$, $x - y = 2$, then $x^2 - y^2 =$
3.	The solution set of the equation : $x^2 - 1 = 8$, where $x \in \mathbb{Z}$ is
4.	If $2^x = 3$, then $8^{-x} =$
5.	The S.S. of the equation : $x^2 - 3 = 0$ in \mathbb{R}
6.	$(9a^2 - 4b^2) = (3a - \dots\dots\dots) (\dots\dots\dots + 2b)$

7.	$x^3 - \dots = (x - 2) (\dots + 2x + 4)$
8.	$(5x - 2y)(25x^2 + 10xy + 4y^2) = \dots$
9.	The S.S. of the following equation : $(x^2 + 3)(x^3 + 1) = 0$ in \mathbb{R} is
10.	A bag contains 9 cards labeled by numbers from 1 to 9 , a card is drawn randomly , then the probability that the card carries an odd number is
11.	$x^2 - y^2 = (\dots - \dots) (\dots + \dots)$
12.	$y^3 - 8 = (\dots - \dots) (x^2 + 2x + \dots)$
13.	$x^2 - 5x + 6 = (x - \dots) (\dots - 3)$
14.	$(a + b)x + (a + b)y = (a + \dots) (\dots + \dots)$
15.	Fifth the number 5^{20} is
16.	If $3^x = 5$, then $(27)^x = \dots$
17.	The solution set of the equation : $x^2 + 1 = 0$ in \mathbb{R} is
18.	If three times a number = 3^3 , then $\frac{2}{3}$ this number =
19.	If $x + y = 7$ and $a - 2b = 4$, then the numerical value of the expression : $a(x + y) - 2b(x + y) = \dots$
20.	If $\left(\frac{2}{3}\right)^x = \frac{27}{8}$, then $x = \dots$
21.	If $x^3 y^{-3} = 8$, then $\frac{y}{x} = \dots$
22.	If $5^{x-2} = 1$, then $x = \dots$
23.	The S.S. of the equation : $x^2 - 16 = 0$ in \mathbb{R} is
24.	The number $(\sqrt{2})^{-4}$ in simplest form is
25.	If $x = (\sqrt{5} - 2)^7$ and $y = (\sqrt{5} + 2)^7$, then $xy = \dots$

- | | |
|-----|---|
| 26. | The solution set of the equation : $x^2 + 9 = 0$ in \mathbb{R} is |
| 27. | The age of a man now x years, then his age 7 years ago is years. |
| 28. | The probability of any event $A \in$ |
| 29. | The probability of the impossible event is |
| 30. | A class has 50 students (boys and girls) , if the probability of choosing a girl randomly is 0.6 , then the number of boys is |

Essay problems:

- | | |
|--|---|
| Factorize each of the following expressions : | |
| 1. | <div style="display: flex; justify-content: space-between;"> <div> <p>(1) $x^2 + 8x + 15$</p> <p>(3) $x^3 - 1$</p> </div> <div> <p>(2) $2x^2 + 7x + 3$</p> <p>(4) $ax - 7a + 3x - 21$</p> </div> </div> |
| 2. | Simplify to the simplest form : $\frac{4^n \times 6^{2n}}{2^{4n} \times 3^{2n}}$ |
| 3. | Find the S.S. for the following equation where $x \in \mathbb{R}$: $x^2 - 8x + 12 = 0$ |
| 4. | If $3^x = 27$, $4^{x+y} = 1$, find the values of : x and y |
| 5. | Find the real number whose double is increased by 1 than its multiplicative inverse. |
| Factorize each of the following : | |
| 6. | <div style="display: flex; justify-content: space-between;"> <div> <p>(1) $4x^2 - 9$</p> <p>(3) $x^2 - 5x$</p> </div> <div> <p>(2) $x^3 + 8$</p> <p>(4) $x^2 - x - 6$</p> </div> </div> |
| 7. | Find in \mathbb{R} the S.S. of the following equation : $x^2 - x - 6 = 0$ |
| 8. | Simplify to the simplest form : $\frac{(\sqrt{2})^5 \times 3^{-2}}{3 \times (\sqrt{2})^9}$ |
| Factorize each of the following completely : | |
| 9. | <div style="display: flex; justify-content: space-between;"> <div> <p>(1) $* 3a^2 + 7a + 2$</p> </div> <div> <p>(2) $5l + 10m + al + 2am$</p> </div> </div> |
| Find the value of the x in each of the following : | |
| 10. | <div style="display: flex; justify-content: space-between;"> <div> <p>(1) $(x - 3)^7 = 128$</p> </div> <div> <p>(2) $4^{2x-1} = 1024$</p> </div> <div> <p>(3) $5^{x-7} = 1$</p> </div> </div> |

Simplify each of the following :

11. (1) $\frac{(\sqrt{3})^{-4} \times (\sqrt{2})^{-5} \times (\sqrt{3})^{-3}}{(\sqrt{3})^{-9} \times (\sqrt{2})^{-7}}$ (2) $\left(\frac{2\sqrt{3}}{3\sqrt{2}}\right)^4$

Find in \mathbb{R} the solution set of each of the following :

12. (1) $x^2 - 9 = 0$ (2) $x^2 = 5x$ (3) $3x = -x^2 - 2$

13. **Simplify to the simplest form :** $(3^{x-1} \times 2^{x+1}) \div 6^{x-1}$

14. If $a = \sqrt{3}$, $b = \frac{1}{\sqrt{3}}$, find the value of : $a^4 + b^{-4}$

15. If $\frac{9^x \times 8^x}{18^x} = 64$, find the value of : x

16. The length of a rectangle is more than its width by 5 cm. If its area is 36 cm^2 , then find its dimensions and its perimeter.

17. **Simplify :** $\frac{4^{x+1} \times 9^{2-x}}{6^{2x}}$, then find the value of the answer when $x = 2$

18. **Find the value of x if :** $3^{2x-3} = 243$

19. If a real number is added to its square the result will be 12 , find this number.

20. If $\frac{8^x \times 9^x}{18^x} = 64$, find : x

21. A bag contains balls labeled by the numbers from 1 to 15 , if a ball is drawn at random , find the probability that the drawn ball carries each of the following :

[1] An even number. [2] A number divisible by 3 [3] A prime number.

22. In producing 600 electric lamps , if the probability of the defected lamps is 0.05 , then find the number of the good lamps and also the number of the defected.

23. A box has 15 regular balls , 3 of them are white , 9 of them are black , a ball is drawn randomly.

Find the probability of the drawn ball is :

[1] Black. [2] Not white and not black.

FIRST: ALGEBRA

Choose the correct answer :

1.	If $\frac{26}{x} + 1 = 14$, then $x = \dots\dots\dots$ (a) 2 (b) 10 (c) 13 (d) 20
2.	If $3^{2n-5} = 1$, then $2n = \dots\dots\dots$ (a) 5 (b) -10 (c) 10 (d) zero
3.	* If $x^3 + 27 = (x + 3)(x^2 + k + 9)$, then $k = \dots\dots\dots$ (a) $-6x$ (b) $-3x$ (c) $3x$ (d) $6x$
4.	The value of $(2)^{20} + (2)^{21} = \dots\dots\dots$ (a) 2^{41} (b) 4^{41} (c) 3×2^{20} (d) 3×2^{21}
5.	If $(x + 3)^{\text{zero}} = 1$, then $x \in \dots\dots\dots$ (a) 3 (b) $\{-3\}$ (c) $\mathbb{R} - \{3\}$ (d) $\mathbb{R} - \{-3\}$
6.	* If $x^2 + kx - 21 = (x - 3)(x + 7)$, then $k = \dots\dots\dots$ (a) -4 (b) 4 (c) 8 (d) 20
7.	If $6^x = 7$, then $6^{x+1} = \dots\dots\dots$ (a) 8 (b) 13 (c) 36 (d) 42
8.	If the product of multiplying four by a number equals 48 , then the third of this number = $\dots\dots\dots$ (a) 4 (b) 8 (c) 12 (d) 16
9.	The value of $2^5 + (\sqrt{2})^{10} = \dots\dots\dots$ (a) 2^6 (b) 2^{10} (c) $(\sqrt{2})^{15}$ (d) $(\sqrt{2})^{20}$

10.	The S.S. of the equation : $x^3 + 9x = 0$ in \mathbb{R} is	(a) $\{0, 3\}$	(b) $\{0\}$	(c) $\{0, 3\}$	(d) $\{0, 3, -3\}$
11.	If $2^x = 5$, then $8^x =$	(a) $\frac{5}{8}$	(b) 25	(c) 125	(d) $\frac{64}{125}$
12.	* If $y^3 - a = (y - 2)(y^2 + 2y + 4)$, then $a =$	(a) 2	(b) 4	(c) 8	(d) -8
13.	If $5^x = 2$, then $5^{x+2} =$	(a) 25	(b) 2	(c) 50	(d) 100
14.	* If $x^2 - a = (x - 3)(x + 3)$, then $a =$	(a) 3	(b) -3	(c) 9	(d) -9
15.	$4^3 + 4^3 + 4^3 + 4^3 =$	(a) 4^3	(b) 4^4	(c) 4^{12}	(d) 4^{81}
16.	* If the expression : $x^2 + 14x + b$ is a perfect square , then $b =$	(a) 2	(b) 7	(c) 14	(d) 49

Complete each of the following :

1.	If $3^{x-2} = 27$, then $x =$
2.	$\left(\frac{-2}{3}\right)^0 =$
3.	The S.S. of the equation : $x^2 + 9 = 0$ in \mathbb{R} , is
4.	If $6^x = 3$, then $6^{x+1} =$
5.	If $3^{x-1} = 27$, then $x =$
6.	$a + b = 2(x + y) = 14$, then $a(x + y) + b(x + y) =$
7.	$4a(x + y) - 3b(x + y) = (x + y)(\dots - \dots)$

8. If $3^x = 27$, then $x = \dots\dots\dots$



Essay problems:

1.	$x^3 + 2x^2 + 4x + 8$ $\dots\dots\dots$ $\dots\dots\dots$ $\dots\dots\dots$	$x^3 - 27$ $\dots\dots\dots$ $y^2 - 7y - 8$ $\dots\dots\dots$ $25x^2 - 30x + 9$ $\dots\dots\dots$
2.	If $\left(\frac{3}{5}\right)^{x-2} = \frac{27}{125}$ Find the value of : x $\dots\dots\dots$ $\dots\dots\dots$ $\dots\dots\dots$	
3.	If $\frac{8^x \times 9^x}{18^x} = 64$ Find the value of : x $\dots\dots\dots$ $\dots\dots\dots$ $\dots\dots\dots$	
4.	If $\left(\sqrt{\frac{2}{3}}\right)^x = \frac{4}{9}$ Find the value of : $\left(\frac{2}{3}\right)^{x-1}$ $\dots\dots\dots$ $\dots\dots\dots$ $\dots\dots\dots$	

5. Find in \mathbb{R} the S.S. of the equation : $x(x+4)(2x-1)=0$

.....

6. If $\left(\frac{2}{5}\right)^{2x-1} = \frac{8}{125}$ Find the value of : x

.....

.....

.....

7. A positive real number if you add its square to its three times the result will be 28 find the number.

.....

.....

.....

8. Find in \mathbb{R} the S.S. of : $x^2 - 8x = -15$

.....

.....

9. Prove that : $\frac{(27)^{x-1} \times 8^x}{(2\sqrt{3})^{2x} \times (3\sqrt{2})^{2x}} = \frac{1}{27}$

.....

.....

.....

10. Simplify : $\frac{4^n \times 6^{2n}}{2^{4n} \times 3^{2n}}$

.....

.....

.....

First: Algebra

- (1) c (2) c (3) a (4) c
 (5) c (6) b (7) c (8) c
 (9) d (10) b (11) c (12) a
 (13) a (14) c (15) a (16) c
 (17) d (18) b (19) b (20) b
 (21) a (22) b (23) b (24) c
 (25) a (26) b

Complete:

- ① $\frac{1}{9}$ ② 8 ③ $\{+3\}$
 ④ $\frac{1}{27}$ ⑤ $\{\pm\sqrt{3}\}$ ⑥ $2b, 3a$
 ⑦ $8, x^2$ ⑧ $125x^3 - 8y^3$ ⑨ $\{-1\}$
 ⑩ $\frac{5}{9}$ ⑪ $(x-y)(x+y)$
 ⑫ $(y-2)(y^2-2y+4)$
 ⑬ $2, x$ ⑭ b, x, y ⑮ 5^{19}
 ⑯ 125 ⑰ ϕ ⑱ 6
 ⑲ 28 ⑳ -3 ㉑ $\frac{1}{2}$
 ㉒ 2 ㉓ $\{\pm 4\}$ ㉔ $\frac{1}{4}$
 ㉕ 1 ㉖ ϕ ㉗ $x-7$

Essay Problems:

- ① (1) $(x-3)(x+5)$
 (2) $(2x+1)(x+3)$
 (3) $(x-1)(x^2+x+1)$
 (4) $(ax-7a)+(3x-21)$
 $= a(x-7) + 3(x-7)$
 $= (x-7)(a+3)$

$$\textcircled{2} \frac{4^n \times 6^{2n}}{2^{4n} \times 3^{2n}} = \left(\frac{4 \times 6^2}{2^4 \times 3^2} \right)^n = 1^n = 1$$

$$\textcircled{3} (x-2)(x-6) = 0$$

S.S. = $\{2, 6\}$

$$\textcircled{4} 3^x = 3^3, 4^{3+y} = 4^0$$

$$\boxed{x=3} \quad 3+y=0 \quad \boxed{y=-3}$$

⑤ Let the number is x

$$2x - \frac{1}{x} = 1 \quad (xx)$$

$$2x^2 - 1 - x = 0$$

$$2x^2 - x - 1 = 0$$

$$(2x+1)(x-1) = 0$$

$$x = -\frac{1}{2} \text{ or } x = 1$$

\therefore the number is $-\frac{1}{2}$ or 1

$$\textcircled{6} (1) (2x-3)(2x+3)$$

$$(2) (x+2)(x^2-2x+4)$$

$$(3) x(x-5)$$

$$(4) (x+2)(x-3)$$

$$\textcircled{7} (x+2)(x-3) = 0$$

$$\text{S.S.} = \{-2, 3\}$$

$$\textcircled{8} (\sqrt{2})^{5-9} \times 3^{-2-1} = (\sqrt{2})^{-4} \times 3^{-3}$$

$$= \frac{1}{2^2} \times \frac{1}{3^3} = \frac{1}{4} \times \frac{1}{27} = \frac{1}{108}$$

$$\textcircled{9} (1) (3a+1)(a+2)$$

$$(2) (5l+10m) + (a^2+2am)$$

$$= 5(l+2m) + a(l+2m)$$

$$= (l+2m)(a+5)$$

$$\textcircled{10} (1) (x-3)^7 = 2^7$$

$$x-3=2 \quad \boxed{x=5}$$

$$(2) 4^{2x-1} = 4^5$$

$$2x-1=5 \quad \boxed{x=3}$$

$$(3) 5^{x-7} = 5^0$$

$$x-7=0 \quad \boxed{x=7}$$

$$(11) (\sqrt{3})^{-4-3+9} \times (\sqrt{2})^{-5+7} = (\sqrt{3})^2 \times (\sqrt{2})^2$$

$$= 3 \times 2 = 6$$

$$(12) \frac{2^4 \times \sqrt{3}^4}{3^4 \times \sqrt{2}^4} = \frac{2^4 \times 3^2}{3^4 \times 2^2} = 2^2 \times 3^{-2}$$

$$= 4 \times \frac{1}{9} = \frac{4}{9}$$

$$(13) \frac{3^{x+1} \times 2^{x+1}}{3^{x-1} \times 2^{x-1}} = 2^{x+1-x+1} = 2^2 = 4$$

$$(14) (\sqrt{3})^4 + \left(\frac{1}{\sqrt{3}}\right)^4 = 3^2 + 3^{-2} = 18$$

$$(15) \left(\frac{2 \times 8}{18}\right)^x = 4^x \therefore 4^x = 4^3$$

$$\therefore \boxed{x=3}$$

$$(16) \text{ let the width} = x, \text{ Length} = x+5$$

$$x(x+5) = 36$$

$$x^2 + 5x - 36 = 0$$

$$(x+9)(x-4) = 0$$

$$x = -9 \text{ neglected}$$

$$\text{or } \boxed{x=4}$$

$$\therefore \text{the width} = 4 \text{ cm, Length} = 9 \text{ cm}$$

$$\therefore P = (4+9) \times 2 = 26 \text{ cm}$$

$$(17) \frac{(2^2)^{x+1} \times (3^2)^{2-x}}{2^{2x} \times 3^{2x}} = \frac{2^{2x+2} \times 3^{4-2x}}{2^{2x} \times 3^{2x}}$$

$$= 2^{2x+2-2x} \times 3^{4-2x-2x}$$

$$= 2^2 \times 3^{4-4x} = 4 \times 3^{-4} = \frac{4}{81}$$

$$(18) \frac{2x-3}{3} = 5$$

$$\therefore 2x-3=5 \quad \boxed{x=4}$$

No Pain, No gain

(19) Let the number is x

$$x^2 + x = 12$$

$$x^2 + x - 12 = 0$$

$$(x+4)(x-3) = 0$$

$$x = -4 \text{ or } x = 3$$

\therefore the number is -4 or 3

(20) As No. (15)

Second: Geometry

- | | | | |
|-----|-----|-----|-----|
| ① c | ② b | ③ c | ④ b |
| ⑤ a | ⑥ b | ⑦ d | ⑧ b |
| ⑨ b | ⑩ d | ⑪ c | ⑫ b |
| ⑬ b | ⑭ d | ⑮ a | ⑯ d |
| ⑰ b | ⑱ b | ⑲ c | ⑳ a |
| ㉑ c | ㉒ c | ㉓ a | ㉔ d |
| ㉕ b | ㉖ a | ㉗ c | ㉘ b |
| ㉙ c | ㉚ b | ㉛ a | ㉜ a |
| ㉝ b | ㉞ c | ㉟ c | ㊱ b |
| ㊲ c | ㊳ b | ㊴ b | ㊵ c |

Complete:

- ① the same area ② m(\angle C)
- ③ the point A ④ 3.5 cm
- ⑤ 45 cm² ⑥ Proportional, equal in measure
- ⑦ 6 cm ⑧ B ⑨ obtuse
- ⑩ base and lie between two Parallel straight line
- ⑪ a point ⑫ >
- ⑬ 32 ⑭ are equal in area
- ⑮ base ⑯ an obtuse

(27) In $\triangle BCD$, $\therefore m(\angle C) = 90^\circ$

$$\therefore (BD)^2 = (BC)^2 + (DC)^2 = 100$$

$$\therefore BD = 10 \text{ cm}$$

$$\therefore AB = AD, E \text{ is midpoint of } \overline{BD}$$

$$\therefore \overline{AE} \perp \overline{BD}$$

$$\text{In } \triangle ABE, \therefore m(\angle E) = 90^\circ$$

$$\therefore (AE)^2 = (AB)^2 - (BE)^2 = 169 - 25 = 144$$

$$\therefore AE = \sqrt{144} = 12 \text{ cm}$$

$$\therefore A. \triangle BCD = \frac{1}{2} \times 8 \times 6 = 24 \text{ cm}^2$$

$$A. \triangle ABD = \frac{1}{2} \times 10 \times 12 = 60 \text{ cm}^2$$

$$\therefore A. \text{ of } ABCD = 24 + 60 = 84 \text{ cm}^2$$

(28) $BC = 20 \text{ cm}$

$$2AD = 20 \therefore AD = 10 \text{ cm}$$

$$\text{middle base} = \frac{20 + 10}{2} = 15 \text{ cm}$$

$$\therefore h = 180 \div 15 = 12 \text{ cm}$$

(29) As No. (18)

Algebra

Essay

(21) $(x^3 + 8) + (2x^2 + 4x)$

$$= (x+2)(x^2 - 2x + 4) + 2x(x+2)$$

$$= (x+2)(x^2 - 2x + 4 + 2x)$$

$$= (x+2)(x^2 + 4)$$

$$\bullet (5a^2 - 1)(5a^2 + 1)$$

$$\bullet (x-3)(x^2 + 3x + 9)$$

$$\bullet (y-8)(y+1)$$

$$\bullet (5x-3)^2$$

(22) $\left(\frac{3}{5}\right)^{x-2} = \left(\frac{3}{5}\right)^3$

$$\therefore x-2=3 \quad \therefore x=5$$

(23) $\left(\frac{8 \times 9}{18}\right)^x = 64$

$$4^x = 4^3 \quad \therefore x=3$$

(24) $\left(\sqrt{\frac{2}{3}}\right)^x = \left(\sqrt{\frac{2}{3}}\right)^4$

$$\therefore x=4$$

$$\therefore \left(\frac{2}{3}\right)^{x-1} = \left(\frac{2}{3}\right)^3 = \frac{8}{27}$$

(25) S.S. = $\{0, -4, \frac{1}{2}\}$

(26) $\left(\frac{2}{5}\right)^{2x-1} = \left(\frac{2}{5}\right)^3$

$$\therefore 2x-1=3$$

$$\therefore x=2$$

(27) $x^2 + 3x = 28$

$$x^2 + 3x - 28 = 0$$

$$(x+7)(x-4) = 0$$

$$x = -7 \text{ neglected}$$

$$\text{or } x = 4$$

$$\therefore \text{the number is } 4$$

(28) $x^2 - 8x + 15 = 0$

$$(x-3)(x-5) = 0$$

$$\therefore \text{S.S.} = \{3, 5\}$$

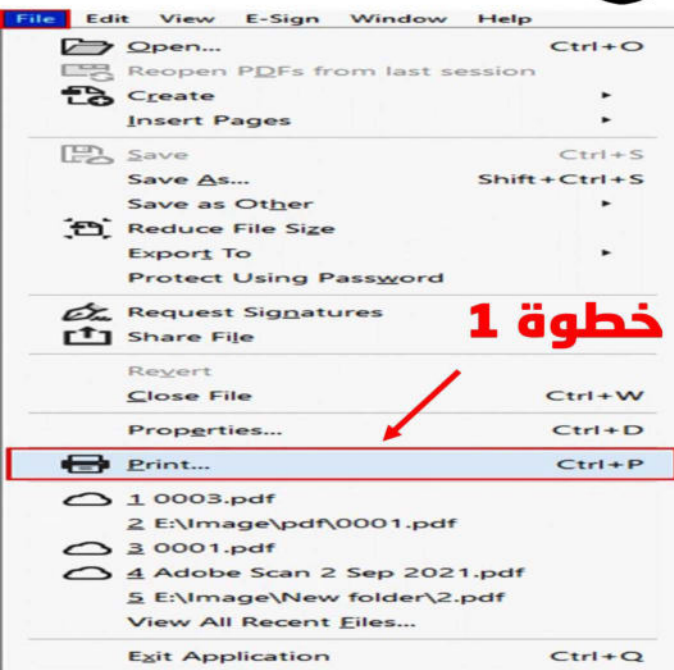
(29) $\frac{(27)^{-1} \times 27^x \times 8^x}{(2\sqrt{3})^{2x} \times (3\sqrt{2})^{2x}}$

$$= (27)^{-1} \times \left(\frac{27 \times 8}{12 \times 18}\right)^x = \frac{1}{27} \times 1 = \frac{1}{27}$$

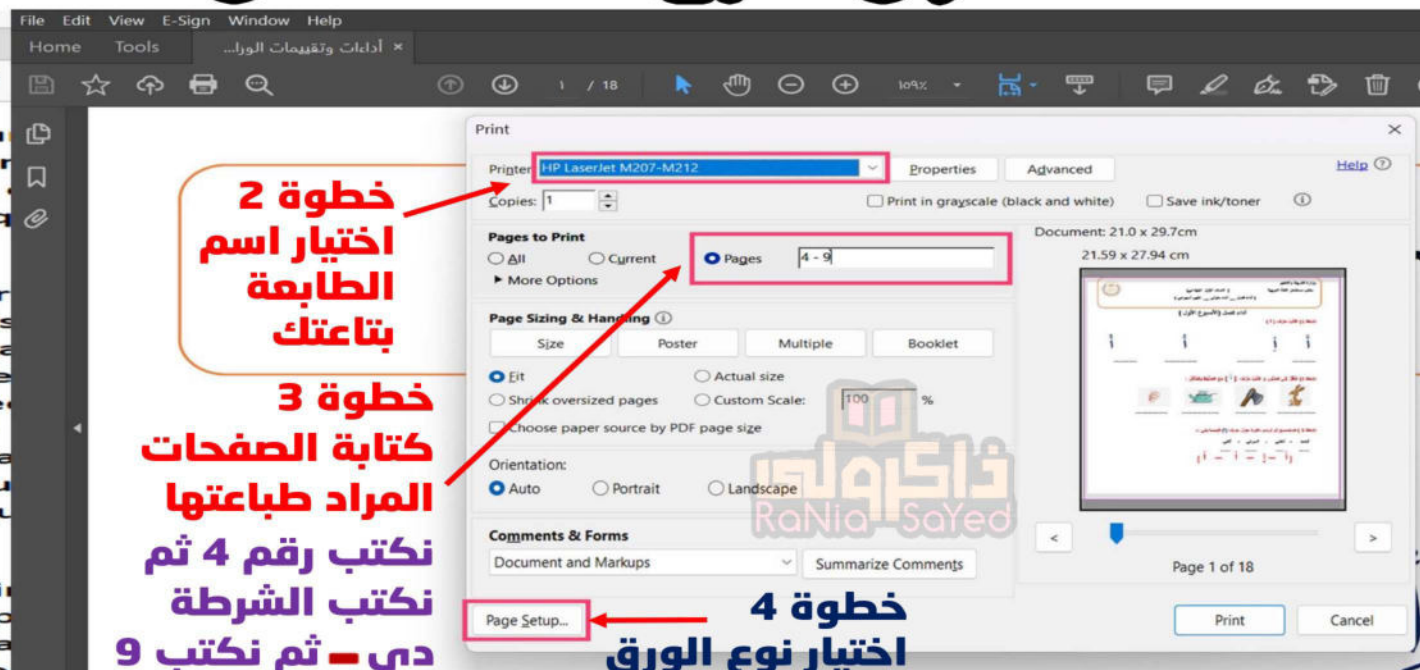
(30) $\left(\frac{4 \times 36}{16 \times 9}\right)^n = 1^n = 1$

كيفية طباعة صفحات معينة من ملف معين

مثلا ازاي نطبع الصفحات من صفحة 4 الى صفحة 9



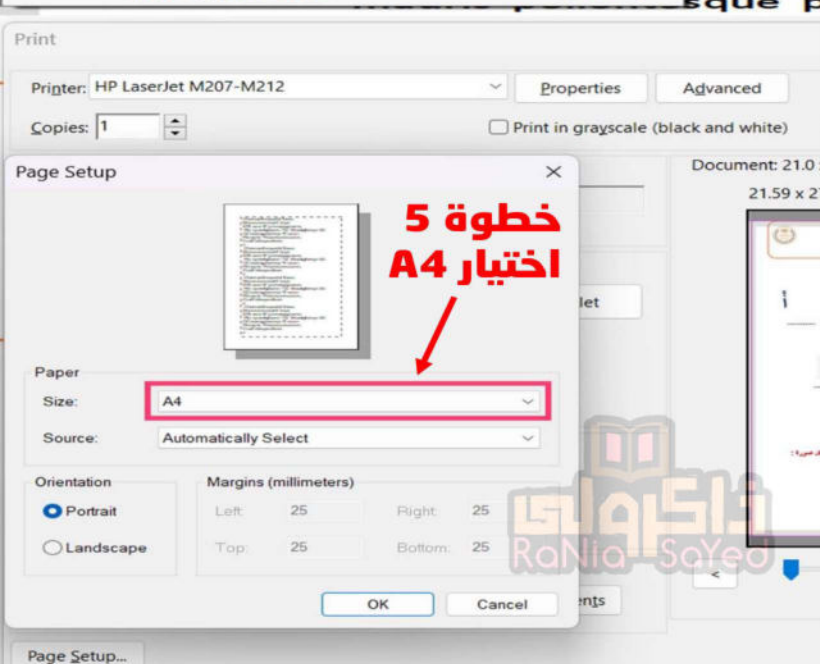
خطوة 1



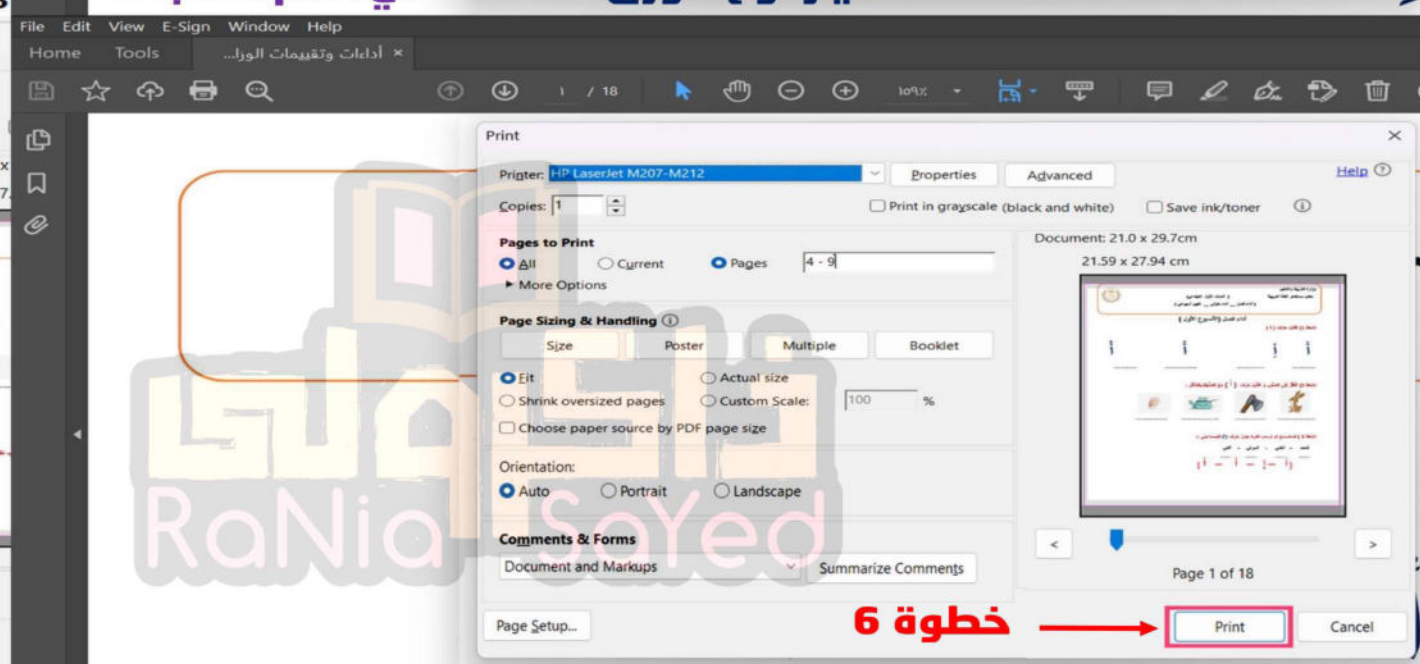
خطوة 2
اختيار اسم
الطابعة
بتاعتك

خطوة 3
كتابة الصفحات
المراد طباعتها
نكتب رقم 4 ثم
نكتب الشرطة
دي - ثم نكتب 9

خطوة 4
اختيار نوع الورق



خطوة 5
اختيار A4



خطوة 6